DOCUMENT RESUME

ED 266 947 SE 046 459

AUTHOR Albrecht, Jean, Ed.; Rodkewich, Patricia, Ed.
TITLE Social Sciences in Forestry. A Current Selected Bibliography and Index, No. 65.
INSTITUTION Minnesota Univ., St. Paul. Coll. of Forestry.
PUB DATE Dec 85
NOTE 172p.; Additional support provided by the U.S. Department of Agriculture Forest Service Research Division.
PUB TYPE Reference Materials - Bibliographies (131) -- Collected Works - Serials (022)

EDRS PRICE MF01/PC07 Plus Postage.
DESCRIPTORS Business; Conservation (Environment); Economics; *Forestry; *Lumber Industry; *Natural Resources; *Publications; Resource Materials; *Social Science Research; *Social Sciences

ABSTRACT

Provided in this document is a bibliography of selected literature addressing the interface between forestry and the social sciences. References include articles appearing in American and foreign professional journals, bibliographies, conference proceedings, and other types of publications. A subject-matter classification scheme is provided in the table of contents. Entries (numbered 2949 to 3674) are listed alphabetically by author according to the topics indicated in this scheme. Major topic areas include social sciences applied to: (1) forestry at large (considering forest resources, economic development, policy, and other areas); (2) forest management (including ownership options and considerations, and other areas); (3) production of forest goods and services (covering outdoor recreation, wilderness management, wildlife and fish, wood production, and other areas); and (4) forest industries (considering wood-using industries, other forest industries, market and trade, and transportation). Each entry includes citation number, author(s), title, source, year, and number of pages. In addition, if the publication is not in English, the language used is indicated. Brief annotations are provided for most entries. A cumulative author index is also included. (JN)

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

DECEMBER, 1985

NO. 65

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
✓ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

ED268947

# SOCIAL SCIENCES in FORESTRY

## A CURRENT SELECTED BIBLIOGRAPHY AND INDEX

College of Forestry
University of Minnesota
St. Paul, MN 55108

SE 046 459

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Univ. of Minnesota
College of Forestry
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

No. 65 Dec. 1985

# SOCIAL SCIENCES IN FORESTRY
## A Current Selected Bibliography and Index

Jean Albrecht, Editor

Patricia Rodkewich, Contributing Editor

Paul V. Ellefson, Professor
Hans M. Gregersen, Professor
Richard A. Skok, Dean
Allen L. Lundgren, Professor

Advisory Group
College of Forestry, University of Minnesota

Cooperators Abroad

Matti Palo, Finland
W. Kollert, West Germany
Werner Kroth, West Germany
Benjamin Olivares, Chile
Eduardo Morales, Chile
Israel Acosta C., Honduras
Nikolaos Stamou, Greece
Cho Eung Hyouk, Korea
Finn Helles, Denmark
E. A. Ochieng Obado, Kenya
Gonzalo Fernandez Tomas, Spain
Ian Brown, United Kingdom
Chaw-Ming Chen, Taiwan
Takuro Kishine, Japan
Jiri Ruprich, Czechoslovakia
Christian Camous, France
George F. Taylor, Mali
Harold P. Sandstrom, Canada
Hugh Bigsby, Australia
M. Van Meigroet, Belgium

Support for this publication was provided by the USDA Forest Service, Research, Washington, DC; the Department of Forest Resources and Agricultural Experiment Station, University of Minnesota, St. Paul, MN; and the University Libraries, University of Minnesota.

Jean Albrecht is Assistant Professor, Librarian, University of Minnesota Forestry Library.

Patricia Rodkewich is Assistant Professor, Agricultural and Applied Economics Bibliographer, St. Paul Campus Libraries, University of Minnesota.

PREFACE

This is the fourth issue of the Social Sciences in Forestry to be published at the University of Minnesota College of Forestry. We are continuing to index the backlog of relevant publications issued during 1982-1984.

References submitted by foreign cooperators are acknowledged by the addition of the cooperator's initials directly following the annotation. We welcome contributions of either references to publications or the publications themselves. We would also welcome additional foreign cooperators, particularly from countries not represented on the title page of this issue. Anyone interested in serving as a cooperator should write to us at the University of Minnesota Forestry Library, 1530 N. Cleveland Avenue, St. Paul, MN 55108.

Loans or xerox copies of publications indexed in Social Sciences in Forestry are available from the Interlibrary Loan Division, St. Paul Campus Libraries, 1984 Buford Avenue, St. Paul, MN 55108.

We gratefully acknowledge the contributions of three people who have helped to bring this issue to press: Theresa Surprenant, data entry operator; Keith Belli, programmer; and Clara Schreiber, word processing specialist.

Jean Albrecht
Patricia Rodkewich

CONTENTS


| | Page |
|---|---|
| Social Sciences Applied to Forestry at Large | |
| General Publications | 1 |
| Forest Resources: Regional, National, International | 3 |
| History | 5 |
| Legislation | 8 |
| Policy | 9 |
| Planning | 11 |
| Appraisal and Valuation | 16 |
| Investment and Finance | 17 |
| Taxation | 20 |
| Subsidization | 22 |
| Economic Development | 23 |
| Social and Communal Forestry | 25 |
| Agroforestry | 28 |
| Sector Analysis | 31 |
| Professional Activities, Education, Employment of Foresters | 32 |
| Research Evaluation and Methodology | 35 |
| Technology Transfer and Extension | 36 |
| Environmental Concerns | 38 |
| Social Sciences Applied to Forest Management | |
| General | 41 |
| Multiple-Use Management | 43 |
| Ownership | |
| Public Lands | 45 |
| Private Ownership: Industrial-Nonindustrial | 46 |
| Labor Considerations - Work Studies | 48 |
| Protection | 51 |
| Production of Forest Goods and Services | |
| Outdoor Recreation | 56 |
| Wilderness Management - Nature Conservation - National Parks | 63 |
| Range Management | 67 |
| Urban Forestry | 70 |
| Watershed Management | 72 |
| Wildlife and Fish | 73 |
| Wood Production | 76 |
| Timber Harvesting | 81 |
| Timber Supply | 83 |
| Timber Sales | 87 |
| Social Sciences Applied to Forest Industries | |
| Wood-Using Industries | 88 |
| Markets-Marketing-Trade | 94 |
| Transportation | 102 |
| Cumulative Author Index 1985 | 103 |

SOCIAL SCIENCES APPLIED TO FORESTRY AT LARGE

GENERAL PUBLICATIONS

2949 Agarwala, V.P., 1985. **Forests in India: Environmental and production frontiers.** New Delhi, Oxford & IBH Publishing Co. 344 pp.

Includes chapters on land use and forest area, forest history, forest management, social forestry, agroforestry, forest-based industries, forest research and education, forestry investment, and forest policy.

2950 Bhattacharya, S.N., 1984 **Indian rural economics.** New Delhi, Metropolitan. 443 pp.

Chapter VIII, pages 194-215, is entitled "Forest Resources in India." Included is a case study of a social forestry project, and a section on the Chipko movement.

2951 Canadian Forestry Service, 1985 **Les forets canadiennes...de la fibre pour le monde: Canada's forests...fibre for the world: El bosque canadiense...fibra para el mundo.** Canadian Forestry Service. 48 pp.

In French, English, and Spanish. Includes chapters on Canada's forest resources, history, forest products industry, and Canada's forest sector. Undated; received in 1985.

2952 Desai, V., 1984 **Issues in agriculture and forestry.** Bombay: Himalaya Publishing Company. 448 pp.

Part II, pp. 288-420, covers forestry. The chapter headings are: forest policy, forest resources, social forestry, developments of forests, fuelwood in the Indian economy, environmental planning in In dia, and forestry management.

2953 Heikinheimo, L., 1985 **Forest economics research bibliography 1960-1983 at the Finnish Forest Research Institute.** Helsinki, Finnish Forest Research Institute, Section of Social Economics of Forestry [64] pp.

2954 Japanese Forest Economic Society, 1985 **The current state of Japanese forestry (IV)--its problems and future.** Tokyo, Japanese Forest Economic Society. 144 pp.

"Contributions to IUFRO, Division 4." An annual publication.

2955 National Board of Forestry, Jonkoping, Sweden, 1985 **Skogsstatistisk arsbok 1985: Statistical yearbook of forestry 1985.** Jonkoping, Sweden, Skogsstyrelsen. 248 pp.

Captions of tables are in Swedish and English. Includes a 7 page English summary. Covers forest land area and growing stock, logging and transport, policy, forest industry production and economy, foreign trade and domestic consumption, prices, the labor force, taxes, investments, subsidies, the forest sector in the national economy, etc.

2956 Tasmania Forestry Commission, 1985 **Forestry in Tasmania.** Tasmania Forestry Commission. 18 pp.
Includes chapters on "the forests," "the timbers," "forest based industry," "management of state forests," and "management of private forests."

2957 Wenger, K.F., editor, 1984 **Forestry handbook.** 2d ed. New York, Wiley. 1335 pp.

2958 Castonguay, T.L., 1984. **Forest area in Nebraska, 1983.** U.S. Forest Service, Research Note NC-324. 4 pp.

2959 FAO, 1985. **Forest resources; ressources forestieres; recursos forestales 1980.** Food and Agriculture Organization of the United Nations. [22] pp.

Maps and tables showing world forest resources. Tables show forest area subdivided between coniferous and non-coniferous, between closed and other wooded land. Maps show, by country, forest as a perce ntage of land area and coniferous and non-coniferous as a percentage of forest area. Tables also show average annual loss in total forest area due to deforestation, and annual area of reforestation.

2960 Fraser, A.I. and Inglis, C.J., 1983. **The hardwood resources of Great Britain and their future management.** In: National Hardwoods Programme, 4th Meeting, Oct., 1983, Report. Oxford, Commonwealth Forestry Institute. pp. 36-45.

2961 Hahn, J.T., 1985. **Timber resource of Wisconsin's Central Survey Unit, 1983.** U.S. Forest Service, Resource Bulletin NC-84. 88 pp.

"Highlights and statistics from the fourth inventory of this unit are presented for area, volume, growth, mortality, removals, utilization, and biomass."

2962 Hansen, M.H., 1984. **Timber resource of Wisconsin's Northeast Survey Unit, 1983.** U.S. Forest Service, Resource Bulletin NC-78. 88 pp.

Presents highlights and statistics for area, volume, growth, mortality, removals, utilization, and biomass.

2963 Holowacz, J., 1985. **Forests of the USSR.** Forestry Chronicle 61:366-373.

2964 Honer, T.G., Hegyi, F., and Bonner, G.M., 1985. **Forest inventory in the USSR, 1982: A report on the visit of Canadian forest inventory specialists to the Soviety Union.** Canadian Forestry Service, Forestry Technical Report no. 34. 18 pp.

"The forest resources of the USSR, the organization that conducts forest inventory, and the methods used in carrying out surveys of various intensities are documented."

2965 Jones, J.R., DeByle, N.V., and Winokur, R.P., 1985. **Wood resource.** In: Aspen: Ecology and management in the western United States. U.S. Forest Service, Gen. Tech. Rep. RM-119:161-167.

"There are 4.4 million acres of commercial aspen forest in the West."

2966 Mety, M.P., 1985. **Louisiana's forest resources.** Forest Farmer 44(6):10-12.

2967 Raile, G.K. and Spencer, J.S., Jr., 1984. **Kansas forest statistics, 1981.** U.S. Forest Service, Resource Bulletin NC-70. 124 pp.
Presents highlights and statistics on area, volume, growth, mortality, removals, utilization and biomass from the third timber resource inventory of Kansas.

2968 Raile, G.K., 1985. **The Lake States red pine resource.** In: Managing red pine: Proceedigns, Society of American Foresters, Region 5 Technical Conference, 2d, Marquette, Mich., 1984. pp. 6-20.

2969 Raile, G.K., 1985. **Timber resource of Wisconsin's Southwest Survey Unit, 1983.** U.S. Forest Service, Resource Bulletin NC-87. 88pp.
"Highlights and statistics from the fourth inventory of this unit are presented for area, volume, growth, mortality, removals, utilization, and biomass."

2970 Spencer, J.S., Jr., 1983. **Michigan's timber resource: Some implications for increased future employment.** In: Moore, M.D., ed. Proceedings of...Conference on Forest Resources, Michigan State University, 1983. pp. 25-30.

2971 Spencer, J.S., Jr., 1985. **Timber resource of Wisconsin's Southeast Survey Unit, 1983.** U.S. Forest Service, Resource Bulletin NC-86. 94 pp.
Presents highlights and statistics from the fourth inventory of Wisconsin's timber resource on area, volume, growth, mortality, and removals.

2972 Statistisk Sentralbyra, Oslo, 1985. **Skogstatistikk 1983. Forestry statistics 1983.** Oslo--Kongsvinger, Statistisk Sentralbyra. Norges Offisielle Statistikk B517. 108 pp.
In Norwegian and English. Presents statistics on Norwegian forestry, including forest area, land area, and growing stock.

2973 VanHooser, D.D. and Green, A.W., 1985. **Idaho's state and private forest resource.** U.S. Forest Service, Resource Bulletin INT-37. 78 pp.
"Presents land area, timberland area, timber volume, and components of change for the state and private forest lands in Idaho."

2974 Bahre, C.J. and Hutchinson, C.F., 1985. **The impact of historic fuelwood cutting on the semidesert woodlands of southeastern Arizona.** Journal of Forest History 29:175-186.

2975 Carpenter, F.R., 1984. **Establishing management under the Taylor Grazing Act.** Your Public Lands 34(3):3-6.
Excerpts from a talk given at Montana State College on Jan. 8, 1962. Carpenter was director of the USDI Division of Grazing from 1934-1938.

2976 Carranco, L., 1982. **Redwood lumber industry.** San Marino, Calif., Golden West Books. 218 pp.
A history of the redwood lumber industry in northwestern California.

2977 Cox, T.R., 1985. **Americans and their forests: Romanticism, progress, and science in the late nineteenth century.** Journal of Forest History 29:156-168.
"In the latter half of the nineteenth century...the scientific approach, championed by George Perkins Marsh and others, gradually gained acceptance." "...positions on the management of natural resources had to have support from science if they were to have much chance of being adopted." (p. 156)

2978 Ellen, R.F., 1985. **Patterns of indigenous timber extraction from Moluccan rain forest fringes.** Journal of Biogeography 12:559-587.
"Using ethnographic and historical data, this paper tries to show the effects of different patterns of demand and extraction on the condition of rain forest fringes in the Moluccan islands of eastern Indonesia." (p. 559)

2979 Fahl, K.A., comp., 1983. **Forest history museums of the world.** Santa Cruz, CA, Forest History Society. Guides to Forest and Conservation History of North America no. 6. 75 pp.
A directory which "includes museums and collections devoted wholly or in significant part to the history of man's use of the forest and its products."

2980 Fukushima, Y. and Nagata, S., 1985. **Japanese forestry before World War II.** In: Japanese Forest Economic Society. The current state of Japanese forestry (IV). pp. 69-88.

2981 Giese, R.L., Peterson, T.A., and Jacobs, M.L., 1983. **A historical account of forestry at the University of Wisconsin-Madison.** University of Wisconsin-Madison, Department of Forestry, Staff Paper Series no. 14. 29 pp.

2982 Hagenstein, P.R., 1984. **Forestland investment and ownership:**

Changing times. Journal of Forest History 28:144-147.
Provides a historical perspective on forestland investment.

2983 Harding, D.M. and Neil, P.E., 1983. **The changing role of forestry in Hong Kong.** Quarterly Journal of Forestry 77:169-175.
Outlines the history of forestry development in Hong Kong since the late 19th century.

2984 Honer, T.G. and Johnstone, K., 1984. **Elihu Stewart and the beginnings of Dominion forestry.** Forestry Chronicle 60: 225-230.
Elihu Stewart was Chief Inspector of Timber and Forestry for the Canadian Department of Interior, 1899-1907.

2985 Hydrick, R., 1984. **The genesis of national park management: John Roberts White and Sequoia National Park, 1920-1947.** Journal of Forest History 28:68-81.

2986 Ishii, Y., 1985. **Development process of forestry in Hokkaido.** In: Japanese Forest Economic Society. The current state of Japanese forestry (IV). pp. 89-100.
Traces forestry development in Hokkaido after the Meiji Restoration of 1868.

2987 Judd, R.W., 1984. **Lumbering and the farming frontier in Aroostook County, Maine, 1840-1880.** Journal of Forest History 28:56-67.

2988 Klemme, M., 1984. **Home rule on the range: Early days of the Grazing Service.** New York, Vantage Press. 208 pp.

2989 Larsen, L.H., 1984. **Wall of flames: The Minnesota forest fire of 1894.** Fargo, North Dakota Institute for Regional Studies. 187 pp.

2990 Malony, B.K., 1985. **Man's impact on the rainforests of West Malesia: The palynological record.** Journal of Biogeography 12:537-558.
"Palynological evidence for man's impact on the rainforests of West Malesia (Sumatra, West Java, Borneo, peninsular Malaysia, the Philippines) is reviewed..."

2991 Olsen, R., 1985. **Administrative history: Organizational structures of the National Park Service 1917 to 1985.** [U.S. National Park Service] 136 pp.
No publishing information provided.

2992 Olson, S.H., 1984. **The robe of the ancestors: Forests in the history of Madagascar.** Journal of Forest History 28:174-186.
The Malagasy refer to the history of Madagascar's forests as "the robe of the ancestors."

2993 Roche, M.M., 1984. **Reactions to scarcity: The management of forest resources in nineteenth-century Canterbury, New Zealand.** Journal of Forest History 28:82-91.

2994 Rohe, R.E., 1984. **Place-names: Relics of the Great Lakes lumber era.** Journal of Forest History 28:126-135.

2995 Rosholt, M., 1982. **Lumbermen on the Chippewa.** Rosholt, Wis., Rosholt House. 303 pp.

A history of lumbering in the Chippewa River Valley in Wisconsin.

2996 Runte, A., 1984. **Trains of discovery: Western railroads and the national parks.** Flagstaff, Arizona, Northland Press. 89 pp.

The author explores the historical relationship between the railroads and the national parks.

2997 Stuart, E., Jr., 1985. **German forestry during the American occupation: Dr. Schenck's pivotal role.** Journal of Forest History 29:169-174.

2998 Walkins, C., 1984. **The use of Forestry Commission censuses for the study of woodland change.** Journal of Historical Geography 10:396-406.

The value of the first two completed Forestry Commission censuses, of 1924 and 1947/9, for the study of woodland change is assessed, and the investigation of past planting trends, the history of individual woods and post-war changes in woodland type and species is discussed. (p. 396)

2999 Adams, P.W., 1984. **Oregon's Forest Practice Rules.** Oregon State University Extension Service, Extension Circular 1194. 11 pp.

3000 Saussay, C. du, 1983. **Forestry legislation for the development of rural communities.** In: FAO. Report of the FAO/SIDA Consultation on Forest Administration for Development, Rome, Feb., 1983. pp. 25-34.

3001 Siegel, W.C., Kramer, B.M., and Mertes, J.D., 1984. **Forest resource law.** In: Wenger, K.F., ed. Forestry handbook. pp. 1165-1178.

Includes sections on timberland acquisition and sale, contract and timber sales law, taxation, forest financing and credit, and the forester in litigation.

3002 Wilson, L.W., 1985. **The Oregon Forest Practices Act.** Journal of Soil and Water Conservation 40:103-104.

"The act establishes public policy aimed at maintaining productive forests, as well as soil, air, and water resources, and providing habitat for wildlife, including aquatic species." (p. 103)

3003 Carr-Harris, J., 1985. **Increasing NGO involvement in forestry: Some implications from Senegal.** Unasylva 37(3)(149):26-31.

3004 Ellefson, P.V., 1985. **Forest residues: Program options to encourage use in northern Minnesota.** Paper presented at Conference & Workshop on Achieving Wood Energy Potentials: Evidence in Northeastern Minnesota, Duluth, MN, Nov. 6-8, 1985. 21 pp. + table.

3005 Gane, M., 1983. **Forest policy-making.** Commonwealth Forestry Review 62:85-92.

One purpose of the author is "to shift attention away from formal declarations of forest policy and, instead, to stress policy-making as a more or less continuous activity."

3006 Hewett, C.E., 1982. **Forest policy: An agenda for the eighties.** In: Hewett, C.E. et al., eds. Forests in demand. pp. 111-126.

3007 Hyman, E.L., 1983. **Forestry administration and policies in the Philippines.** Environmental Management 7:511-523.

This article begins by summarizing the importance of the forestry sector in the Philippine economy. Then it discusses forestry laws in the country and concludes by examining fifteen critical forest policy issues.

3008 Kartasubrata, J., 1985. **Forest policy, legislation and administration in Indonesia.** Nederlands Bosbouwtijdschrift 57:167-175.

3009 Kobayashi, Y., 1985. **Conversion of forest policy--searching for a new vision.** In: Japanese Forest Economic Society. The current state of Japanese forestry (IV). pp. 52-63.

3010 Maki, W.R., Olson, D., and Schallau, C.H., 1985. **A dynamic simulation model for analyzing the importance of forest resources in Alaska.** U.S. Forest Service, Research Note PNW-432. 12 pp.

The model, which has been adapted for use in Alaska, "provides a flexible tool for examining the economic consequences of alternative forest resource management policies."

3011 Olson, D., Schallau, C., and Maki, W., 1984. **IPASS: An interactive policy analysis simulation system.** U.S. Forest Service, Gen. Tech. Rep. PNW-170. 70 pp.

"This paper describes an interactive policy analysis simulation system (IPASS) that can be used to analyze the long-term economic and demographic effects of alternative forest management policies."

3012 Palin, D., 1983. **Public forestry administration and its role in forest and rural development.** In: FAO. Report of the FAO/SIDA Consultation on Forest Administration for Development, Rome, Feb. 1983. pp. 71-77.

"This paper discusses two factors which at present represent crippling constraints to rural development in tropical countries: The system of rural institutions and the degradation of the environment." (p. 71)

3013 Pope, A.W., 1982. **Future government policy.** University of Toronto, Faculty of Forestry, Weyerhaeuser Lecture Series 1982. pp. 3-10.

Forest policy and management in Ontario is discussed.

3014 Quebec Ministere de l'Energie et des Ressources, 1985. **Building a forest for tomorrow: The forest policy.** Quebec Ministere de l"Energie et des Ressources. 98 pp. + glossary.

3015 Tixier, S., Feuchter, R., Girton, D., and Leonard, G., 1985. **Communications/awareness discussions: Important, nationally significant information from persons interested in the Forest Service.** Fort Collins, Colorado, U.S. Forest Service Regional Foresters and Directors Meeting. 24, 48, 8 pp.

Summarizes discussions with 73 persons from across the U.S. who had varying associations with the Forest Service. "The purpose was to obtain participant's views of conditions and actions in recent years that may be fostering conflict; and their ideas for reducing that conflict and improving cooperation."

3016 Weetman, G.F., 1983. **Forestry practices and stress on Canadian forest land.** In: Stress on land in Canada. Produced and co-ordinated by Wendy Simpson-Lewis, Ruth McKechnie, and V. Neimanis. Ottawa, Policy Research and Development Branch, Lands Directorate, Environment Canada. pp. 259-301.

"Problems of stress, or the negative impacts of forestry, are those with real losses in soil fertility; with the loss of species or of the quality or ages of tree species and associated plant and animal species; with the loss of unique or valuable habitat or of landscape value." (p. 261)

3017 Adeyoju, S.K., 1983. **Planning and procedures for land use decisions.** In: FAO. Report of the FAO/SIDA Consultation on Forest Administration for Development, 1983. pp. 165-173.

3018 Allison, B.J., 1985. **A philosophy of forest planning.** Thunder Bay, Ontario, Lakehead University, Ontario Forest Industries Lectureship March 29, 1985. 30 pp.

3019 Beasley, J.L. and LeMaster, D.C., 1982. **Administrative mechanics of the RPA.** In: Hewett, C.E. et al., eds. Forests in demand. pp. 155-161.

One section of the Forest and Rangeland Renewable Resources Planning Act of 1976 requires the Secretary of Agriculture to prepare a Renewable Resource Assessment in 1975, 1979, and every ten years thereafter.

3020 Bergoffen, G.F., 1982. **Industrial aspirations for the RPA's next round.** In: Hewett, C.E. et al., eds. Forests in demand. pp. 203-213.

Discusses the impact of the Forest and Rangeland Renewable Resources Planning Act's impact on the U.S. forest products industry.

3021 Bourchier, R.J., 1982. **Forestry in Canada: National needs but provincial control.** In: Hewett, C.E. et al., eds. Forests in demand. pp. 69-76.

3022 Carmean, W.H., 1982. **Land evaluation for forest resources use.** Rome, Food and Agriculture Organization of the United Nations, Forestry Department. 118 pp.

"This is the preliminary draft of a practical manual that gives field workers guidelines for use in developing local forest land evaluations."

3023 Cortner, H.J. and Schweitzer, D.L., 1983. **Limits to heirarchical planning and budgeting systems: The case of public forestry.** Journal of Environmental Management 17:191-205.

3024 Countryman, D.W. and Sofranko, D.M., editors, 1982. **Guiding land use decisions: Planning and management for forests and recreation.** Baltimore, Johns Hopkins University Press. 251 pp.

3025 Cutler, M.R., 1982. **Managing America's renewable resources: The global challenge.** In: Hewett, C.E. et al., eds. Forests in demand. pp. 3-12.

"The author concludes that the U.S. should "set the example of wise planning and use in the nation's forests," and secondly, that we should "view technology as a global resource and use our capacity and global position to share that

resource...with other nations." (p. 12)

3026 Dawson, K.J. and Sutter, G.E., 1985. **Research issues in riparian landscape planning.** In: Johnson, R.R. et al., tech. coord. Riparian ecosystems and their management. pp. 408-412.
Describes a research program which was established at the University of California at Davis, "to study the integration of conservation versus development objectives."

3027 Ellefson, P.V., 1983. **Land-use and program planning: Processes and administration in forestry.** In: FAO. Report of the FAO/SIDA Consultation on Forest Administration for Development, Rome, Feb., 1983. pp. 45-59.

3028 Fedkiw, J., 1982. **The USDA decision process for the 1980 RPA.** In: Hewett, C.E. et al., eds. Forests in demand. pp. 163-168.

3029 Fey, W.R. and Robinson, V.L., 1983. **Interrelationships among the biological, financial and silvicultural decisions in forestry.** In: U.S. Forest Service. Proceedings of the National Silviculture Workshop, 1983. pp. 86-105.

3030 Fischer, A., 1985. **Waldveranderungen als Kulturlandschaftswandel Kanton Luzern.** Basler Beitrage zur Geographie no, 32. 214 pp.
In German with English summary: "Changes in forest as a transformation of the cultural landscape--canton Lucerne." "The findings show that forest has assumed an independent role as a factor in the changing pattern of land-use, with consequent effects on the image of the forest in the cultural landscape."

3031 Frey, H.T. and Hexem, R.W., 1985. **Major uses of land in the United States: 1982.** U.S. Department of Agriculture, Agricultural Economic Report no. 535. 29 pp.
The report shows that in 1982 "forest land...and miscellaneous other land decreased sharply as large acreages in these categories were reclassified as parks, wilderness, wildlife, and related uses."

3032 Garrett, L.D., 1985. **Developing multireource models for the land management planning process.** In: Proceedings--Growth and Yield and Other Mensurational Tricks: A Regional Technical Conference, Logan, Utah, 1984. U.S. Forest Service, Gen. Tech. Rep. INT-193:53-56.

3033 Greenhalgh, R., 1983. **Some economic aspects of RB planning.** In: U.S. Forest Service. Proceedings of the National Silviculture Workshop, 1983. pp. 190-195.

3034 Hamilton, T.E. and Thornton, P.L., 1982. **The RPA assessment and program.** In: Hewett, C.E. et al., eds. Forests in demand.

pp. 169-189.
Discusses the Forest Service's assessment required by the Forest and Rangeland Renewable Resources Planning Act of 1974.

3035 Hart, T.M., 1985. **Natural resource assessment from a state perspective.** In: Proceedings--Growth and Yield and Other Mensurational Tricks: A Regional Technical Conference, Logan, Utah, 1984. U.S. Forest Service, Gen. Tech. Rep. INT-193:97-98.

3036 Hewett, C.E. and Peterson, E., 1982. **The forest resource: Emerging conflicts and the need for action.** In: Hewett, C.E. et al., eds. Forests in demand. pp. 13-28.
"The authors conclude that it is necessary "to draw up a comprehensive agenda that will bring a long-term, multi-resource perspective to resource allocation." (p. 28)

3037 Hewett, C.E., Hamilton, T.E., and Anderson, I.C., eds., 1982. **Forests in demand: Conflicts and solutions.** Boston, Auburn House Pub. Co. 265 pp.
A collection of papers relating to forest resource planning. Selected papers have been indexed.

3038 Hitchcock, R.B., 1985. **State forestry programs: Timberland strategies.** In: Ellefson, P.V. et al., eds. Forest industry as a force in economic development: Options for Minnesota's future. pp. 32-33.

3039 Jobstl, H.A., 1984. **Zur Funktion und Bedeutung monetarer Bewertungen in der Forsteinrichtung.** Centralblatt fur das Gesamte Forstwesen 101:96-108.
In German, with English summary: "On the necessity of incorporating monetary values or value ratios into forest management planning." "In this paper a method of taking into account the cost affecting site factors in the course of the inventory--as a precondition for estimation of logging costs and thus for evaluation--is introduced." (p. 108)

3040 LeHeron, R.B. and Roche, M.M., 1985. **Expanding exotic forestry and the extension of a competing use for rural land in New Zealand.** Journal of Rural Studies 1:211-229.
This paper examines the competitive extension of afforestation as a rural land use in New Zealand. The paper shows how the differentially and relatively autonomous expansion of segments of the forest sector and the declining profitability of pastoral farming have influenced attitudes and actions of different groups to the quantity and quality of land used for agriculture and forestry. (p. 211)

3041 Maki, W.R., 1982. **Economic impact.** In: Countryman, D.W. and Sofranko, D.M., editors. Guiding land use decisions: Planning and management for forests and recreation. pp. 109-139.
"Economic impact analysis is an important step in guiding

land use decisions. Included in economic impact analysis is the study of the effects of land use decisions on public facility requirements and public finances." (p. 109)

3042 Marose, R.K. and King, D.A., 1983. **Partial selections of discrete forest alternatives: Economic implications.** Final report of a research agreement between Rocky Mountain Forest and Range Experiment Station and University of Arizona School of Renewable Resources. 98 pp.

Title of project: "Methodolgy to balance adequacy of minimum protective standards for wildlife and fish and the implied opportunity costs." The purpose of the study was "to investigate the validity of hypotheses developed from theoretical considerations concerning the error in cost predictions for partial selection alternatives using realistic forest planning methods and data."

3043 McGuire, J.R., 1982. **The RPA--something for everyone.** In: Hewett, C.E. et al., eds. Forests in demand. pp. 147-151.

Discussion of Forest and Rangeland Renewable Resources Planning Act of 1974.

3044 Medema, L., 1983. **Economic efficiency in the Forest Service planning process: A critique of the definition of economic efficiency.** In: U.S. Forest Service. Proceedings of the National Silviculture Workshop, 1983. pp. 147-155.

3045 Merzenich, J.P., 1983. **Integrating forest planning with regional planning and management.** In: U.S. Forest Service. Proceedings of the National Silviculture Workshop, 1983. pp. 36-43.

"This study proposes...linking forest planning to short-term budgeting." (p.42)

3046 Ortman, T., 1983. **The framework for examining silvicultural options in forest planning.** In: U.S. Forest Service. Proceedings of the National Silviculture Workshop, 1983. pp. 26-35.

3047 Palmer, C., Row, C., and Randall, R.M., 1983. **The role of economics in national forest planning.** In: U.S. Forest Service. Proceedings of the National Silviculture Workshop, 1983. pp. 10-25.

3048 Rose, G.A., 1982. **State forestry objectives for federal resource planning in 1985.** In: Hewett, C.E. et al., eds. Forests in demand. pp. 197-202.

"State forestry agencies have become increasingly involved in longer-range forest resource planning as a result of the Forest and Rangeland Renewable Resources Planning Act and subsequent related legislation." (p. 197)

3049 Row, C., 1983. **Legal requirements for economic analysis.** In: U.S. Forest Service. Proceedings of the National Silviculture Workshop, 1983. pp. 6-9.
"The legal requirements for economic analysis have been growing more stringent with the passage of NEPA and NFMA, and subsequent court decisions."

3050 Salcedo, S., 1984. **Panorama Florestal Latino-americano.** Brasil Florestal 13(57):5-23.
In Portugese. English title: "Panorama of forest development in Latin America."

3051 Shands, W.E., 1982. **The future of RPA.** In: Hewett, C.E. et al., eds. Forests in demand. pp. 235-243.

3052 Spurr, S.H., 1982. **North American forests: Converging forces and emerging trends.** In: Hewett, C.E. et al., eds. Forests in demand. pp. 29-34.

3053 U.S. Forest Service, Northeastern Area, 1985. **People and forests: Refocus on opportunity. Long range plan, Northeastern Area, State and Private Forestry, USDA Forest Service.** U.S. Forest Service, Northeastern Area. 13 pp.

3054 Washington Forest Protection Association, 1983. **Local government land-use planning and the forest manager.** Washington Forest Protection Association. 52 pp. + app.

3055 Wolf, R.E., 1982. **Past planning experience in the United States.** In: Hewett, C.E. et al., eds. Forests in demand. pp. 63-67.

3056 Wolf, R.E., 1982. **The goals of the authors of the RPA.** In: Hewett, C.E. et al., eds. Forests in demand. pp. 137-146.
A discussion of the Forest and Rangeland Renewable Resources Planning Act of 1974.

3057 Allen, S.D., 1985. **Estimating the economic value of recreation resources: A legal and policy perspective.** In: Johnson, R.R. et al., tech. coord. Riparian ecosystems and their management. pp. 426-432.

3058 Berry, P.M., 1983. **The landscape, ecological and recreational evaluation of woodland.** Arboricultural Journal 7:191-200.

3059 Meyer, P.A., 1985. **Public values for riparian ecosystems: Experimental results in the west and implications for the Grand Canyon.** In: Johnson, R.R. et al., tech coord. Riparian ecosystems and their management. pp. 417-420.

"Economic, psychological and legal arguments for use of compensatory procedures in valuing riparian resource protection and restoration activities are presented."

3060 Mississippi Cooperative Extension Service and Mississippi Agricultural and Forestry Experiment Station, 1982. **Use value appraisal of crop and forest land: Appraisal manual for assessors.** Mississippi Cooperative Extension Service and Mississippi Agricultural and Forestry Experiment Station. 43 pp. + app.

Undated: Probable date of publication is 1982.

3061 Mullane, R., 1985. **Shade tree values.** The Shade Tree 58:97-100.

3062 Pope, C.A., III, Goodwin, H.L., and Albrecht, D.E., 1984. **Romance value of range and forest land.** Rangelands 6:161-162.

"The objective of this paper is to draw attention to the importance of the romance value of public range and forest land and to point out the need for interdisciplinary research to determine its importance with respect to the management of this land." (p. 161)

3063 Tittman, P.M. and Brownell, C.E., 1984. **Appraisal report estimating fair market rental value of public rangelands in the western United States administered by USDA-Forest Service and USDI-Bureau of Land Management.** U.S. Forest Service; U.S. Bureau of Land Management. 2 vols.

"The purpose of the appraisal is to estimate the fair market rental value of grazing on the public rangelands...."

3064 Bedient, P.M., 1985. **Unique financial reporting considerations for readers of forest products companies financial statements.** Oregon State University, Studies in Management and Accounting for the Forest Products Industries no. 25. 12 pp.
"This monograph provides an introduction to the accounting and tax concepts of the forest products industry."

3065 Bentley, W.R., Countryman, D.W., Mackinnon, D.A., and Marchetta, J.S., 1984. **Analysis for managerial decision.** In: Wenger, K.F., ed. Forestry handbook. pp. 985-1040.
Includes sections on accounting concepts, break-even analysis, incremental decision, financial analysis, and nonfinancial analyses such as cost/effectiveness and land-use planning.

3066 Brodie, J.D. and Haight, R.G., 1985. **Optimization of silvicultural investment for several types of stand projection systems.** Canadian Journal of Forest Research 15:188-191.

3067 Bullard, S.H. and Straka, T.J., 1985. **What is your "effective" rate of reforestation cost?** Forest Farmer 54(1):16-17.
"Effective regeneration costs depend on your interest rate, marginal tax rate, and whether or not you receive assistance from a state or federal cost-share program." (p.16)

3068 Conger, S.L., 1985. **Economic feasibility of investing in planted and naturally regenerated even-aged loblolly pine stands in northcentral Louisiana.** Louisiana Rural Economist 47(4):2-4.
This article summarizes a recent study which analyzed whether investing in loblolly pine production in northcentral Louisiana is a good economic investment and, if so, what method of regeneration and what thinning and rotation options are most likely to yield the highest returns. (p. 2)

3069 Elwood, N.E. and McMahon, R.O., 1983. **Forestry financial analysis II: Worksheets for how-to-do-it.** Oregon State University Extension Service, Extension Circular 1147. 31 pp.

3070 Elwood, N.E. and McMahon, R.O., 1983. **Forestry financial analysis III: How to compare two (or more) investments.** Oregon State University Extension Service, Extension Circular 1148. 27 pp.

3071 Elwood, N.E., 1983. **Forestry financial analysis I: An introduction for landowners.** Oregon State University Extension Service, Extension Circular 1146. 6 pp.

3072 Gilbert, A.M., 1984. **Investing in timberland--the Hutton case.** Consultant 29:14-16.

Discusses the Hutton Timber Resources Corporation, a wholly owned subsidiary of E.F. Hutton and Co.

3073 Graham, D.S., 1985. **Timber and the institutional investment pool.** Forest Farmer 45(2):12-13.

3074 Hall, D.O., 1983. **Financial maturity for even-aged and all-aged stands.** Forest Science 29:833-836.

3075 Harou, P.A., 1983. **A note on the real rate of discount.** Forest Science 29:249-252.

3076 Harou, P.A., 1985. **On a social discount rate for forestry.** Canadian Journal of Forest Research 15:927-934.
"After a review of the literature on the discount rate in economics and forestry, a methodology is propsed to arrive at an appropriate social discount rate to appraise public forestry investments." (p. 927)

3077 Hickman, C.A., 1985. **How to evaluate your timberland investment.** Forest Farmer 45(2): 26-28.
The author reviews the investment analysis process and discusses its forestry applications.

3078 Klemperer, W.D., 1983. **Some implications of inflation-caused changes in timing of asset yields.** Forest Science 29:149-159.
"...inflation can shift the timing and present value of income from new investments. This paper examines the anatomy of such shifts and their possible impacts on resource allocation."

3079 Kurtz, W.B. and Trokey, C.B., 1984. **Determining the profitability of timber stand improvement investments.** University of Missouri--Columbia Extension Division, Agricultural Guide 5151. 4 pp.

3080 Lothner, D.C. and Bradley, D.P., 1984. **A new look at red pine financial returns in the Lake States.** U.S. Forest Service, Research Paper NC-246. 4 pp.
"Best combinations of initial stocking, residual basal area after thinning, and rotation age are identified for two different financial criteria: Soil expectation value and internal rate of return."

3081 Marty, R., 1985. **Is red pine management profitable?** In: Managing red pine: Proceedings, Society of American Foresters, Region 5 Technical Conference, 2d, Marquette, Mich., 1984. pp. 71-78.

3082 Nautiyal, J.C. and Rezende, J.L., 1983. **Dynamic investment considerations in forestry project evaluations.** Canadian Journal of Forest Research 13:640-647.

"The reasons why benefit-cost analysis has not been very popular with foresters are indicated." (p. 640)

3083 Shaffer, R.M., Klemperer, W.D., and Meyer, R.D., 1985. **Determining the initial annual payment for a long-term timberland lease.** Southern Journal of Applied Forestry 9:250-253.

3084 Straka, T.J., Bullard, S.H., and Watson, W.F., 1985. **Primer on forestry investment.** Forest Farmer 45(2):10-11.

3085 Stumbles, R.E., 1985. **Forestry as an investment.** Quarterly Journal of Forestry 79:237-242.

The implications of a rise in the real value of forest products is rarely appreciated, the author argues. "As a result the value of forestry as an investment tends to be undervalued." (p. 242)

3086 Syson, W.W.C., 1985. **Forestry financing--Scottish bank plays major role.** Forestry and British Timber 14(9):30-32.

Discussion of forestry investment in Gt. Britain, including "grant aid" and tax incentives.

3087 Texas Extension Forestry Assistance Committee [Conference], College Station, 1982. **Proceedings: A new era for timberland investment. Sponsored by Texas Agricultural Extension Service. 92 pp.**

3088 Boyd, R. and Daniels, B.J., 1985. **Capital gains treatment of timber income: Incidence and welfare implications.** Land Economics 61:354-362.
"This study presents the results of a quantitative analysis of the economy-wide impact of the capital gains treatment of lumber." (p.354)

3089 Burns, G.A. and Baker, R.D., 1983. **The Texas timber use-value tax.** Consultant 28:58.

3090 Condrell, W.K., 1985. **Taxation update.** Forest Farmer 45(2):8-9.
The author states that "the President's tax proposal will seriously harm timber owners--especially those who manage their stands for maximum yield."

3091 Countryman, D.W. and Wray, P.H., 1984. **Tax savings on timber sales.** Iowa State University Cooperative Extension Service, PM-1162. 7 pp.
A general introduction to tax laws and tax incentives for woodland owners.

3092 Great Britain Forestry Commission, 1985. **Taxation of woodlands.** 7th ed. Gt. Britain Forestry Commission, Leaflet no. 12. 14 pp.

3093 Harkleroad, D.R., 1982. **General federal tax principles relating to timber business expenditures and depletion allowance computations.** Agricultural Law Journal 4:137-152.

3094 Howard, T.E., 1985. **Estate planning for nonindustrial forest owners.** Land Economics 61:363-371.
"This paper presents research results on the interaction of business form, funding technique, and forest management on federal income and estate tax liabilities of private nonindustrial forest owners." (p.363)

3095 Kronrad, G.D. and Harou, P.A.W., 1985. **An economic evaluation of the Massachusetts forestry yield tax program.** Forestry Chronicle 61:358-362.
"Owners of 10 or more contiguous acres of forest land in Massachusetts are eligible to classify their property under a modified assessment-yield tax property tax law... Benefit-cost ratios...were calculated to evaluate the economic efficiency of this program."

3096 Leuschner, W.A. and Haney, H.L., Jr., 1985. **Southern forestry and a modified flat tax.** Southern Journal of Applied Forestry 9:201-205.
The authors "examine the possible impacts of the President's and the Treasury Department's tax reform proposals

on forestry investment, using a southern pine plantation model and PNW and IRR investment criteria."

3097 Sedbrook, T.A. and Myles, G., 1982. **Reporting federal income taxes on timber income.** Wyoming State Forestry Division. 22 pp. + 1 app.

Publishing imformation and date are unclear. The authors are with the Wyoming State Forestry Division and U.S. Forest Service, respectively.

3098 Siegel, W.C., 1982. **Recent developments in federal income and death taxes.** In: Texas Extension Forestry Assistance Committee [Conference], College Station, 1982. Proceedings: A new era for timberland investment. pp. 55-69.

3099 Siegel, W.C., 1985. **Recent tax decisions on estate valuation and casualty deductions.** Forest Farmer 45(2):14-15.

The author discusses "two matters of extreme importance to forest farmers: federal estate taxes and casualty loss tax deductions."

3100 Slocum, B. and Champaign, E., 1982. **Tax and the tree farmer--timber leases and capital gains.** American Tree Farmer, Summer, 1982, pp. 12-13.

3101 Stier, J.C. and Chang, S.J., 1983. **Land use implications of the ad valorem property tax: The role of the tax incidence.** Forest Science 29:702-712.

"This paper analyzes the land use implications of an unmodified property tax when landowners are able to shift some or all of the tax forward to comsumers in the form of higher commodity prices." (p. 703)

3102 Sutherland, C.F., 1983. **Oregon's forest products harvest tax.** Oregon State University Extension Service, Extension Circular 1151. 3 pp.

"In addition to property taxes, including severence taxes on privately owned timber, Oregon levies a special tax on all 'merchantable forest products' harvested from private, county, state, and Federal forest land."

3103 Sutherland, C.F., Jr., 1983. **Forest property taxation in western Oregon.** Oregon State University Extension Service, Extension Circular 1136. 6 pp.

3104 Walden, J.B., Haney, H.L., Jr., and Siegel, W.C., 1985. **Planning can reduce state death taxes.** Forest Farmer 45(2):16-17.

"Proper planning is essential in many states in order to finance death tax liabilitiy without disrupting management plans. Foresters and landowners need to be aware of the death tax provisions in their states."

3105 Brannlund, R., Goransson, M., and Lofgren, K.G., 1985. **The effects on the short-run supply of wood from subsidized regeneration measures: An econometric analysis.** Canadian Journal of Forest Research 15:941-948.

"The purpose of this paper is to analyse whether regionally concentrated subsidies directed towards forestry have had any short-run effect on timber supply in northern Sweden." (p. 941)

3106 Kronrad, G.D. and Morzuch, B.J., 1985. **The Forestry Incentives Program and forest yield taxation in Massachusetts: Do we need the subsidy?** Journal of Forestry 83:730, 753-754.

"In Massachusetts, nonindustrial private forest landowners are offered two incentive programs: The Forestry Incentives Programs (FIP) and a modified assessment-yield tax law."

3107 Olenderski, K., 1984. **The Forestry Incentives Program.** Pennsylvania Forests 74(4):15-16.

3108 Risbrudt, C.D., 1983. **An evaluation of federal silvicultural investments made through the 1979 Forestry Incentives Program.** In: U.S. Forest Service. Proceedings of the National Silviculture Workshop, 1983. pp. 156-174.

This article reports an evaluation of the cost effectiveness of the 1979 FIP.

3109 Tsuru, S., 1985. **Trends of expenditure structure in Japanese forestry.** In: Japanese Forest Economic Society. The current state of Japanese forestry (IV). pp. 37-45.

A discussion of public funding for various forestry incentives programs in Japan.

3110 Aldwell, P.H.B., 1984. **Some social and economic implications of large-scale forestry in Waiapu County.** New Zealand Forest Service, Forest Research Institute, FRI Bulletin no. 75. 39 pp.

3111 Atmosoedarjo, S. 1984. **Forestry and the rural community.** In: Jackson, J.K., ed. Social, economic, and institutional aspects of agro-forestry. pp. 75-80.

3112 Chandrasekharan, C., 1983. **Rural organizations in forestry.** In: FAO. Report of the FAO/SIDA Consultation on Forest Administration for Development, Rome, Feb., 1983. pp. 79-95.

This paper reviews "the role and need for organizations related to forestry at the rural level to promote the contribution of forestry to rural development."

3113 Chowdhry, K., 1983. **Forestry development: Strategy and structure.** In: FAO. Report of the FAO/SIDA Consultation on Forest Administration for Development, Rome, Feb., 1983. pp. 35-43.

"The author describes briefly "the historical perspective of forestry policy and the gap between policy formulation and performance." More specifically, he discusses "the strategy and structure, and the management system of production forestry and social forestry." (p. 35)

3114 FAO Forestry Department, 1985. **Forestry for development.** Food and Agriculture Organization of the United Nations. 15 pp.

A brochure outlining FAO's forestry program of promoting and assisting activities to enable developing countries to benefit fully from their forest resources.

3115 FAO Forestry Department, 1985. **Wood for energy.** Rome, Food and Agriculture Organization of the United Nations, Forestry Topics Report no. 1. 40 pp.

Describes the present problems relating to the use of fuelwood and charcoal in developing countries and discusses the FAO Wood for Energy Programme.

3116 FAO, 1983. **Report of the FAO/SIDA Consultation on Forest Administration for Development, Rome, Feb., 1983.** Rome, Food and Agriculture Organization of the United Nations. Swedish Funds-in-Trust, FOR:GCPINT 295 (SWE). 188 pp.

Includes the proceedings of the Consultation, conclusions and recommendations of the working groups, papers presented during the consultation, and the reports of the working groups.

3117 FAO, Human Resources, Institutions and Agrarian Reform Division, 1983. **Integration of forestry in rural development programmes--some policy issues.** In: FAO. Report of the FAO/SIDA Consultation on Forest Administration for

Development, Rome, Feb., 1983. pp. 103-109.

3118 Hoskins, M.W., 1983. **Participation in forestry for local development: Enabling mechanisms.** In: FAO. Report of the FAO/SIDA Consultation on Forest Administration for Development, Rome, Feb., 1983. pp. 111-115.

3119 Jonsson, S., 1985. **Forestry literature for development workers.** Revised edition. Sveriges Lantbruksuniversitet, U-landsavdelningen, Arbetsrapport no. 33. 151 pp.
A guide to forestry literature for developing countries. Covers such subjects areas as: The role of forestry in developing countries, land use, planning and analysis of forestry projects, forestry for local community development, agroforestry, education and extension work.

3120 McClintock, W. and Taylor, N., 1983. **Pines, pulp and people: A case study of New Zealand forestry towns.** University of Canterbury and Lincoln College, Center for Resource Management, Information Paper no. 2. 99 pp.

3121 Parore, T., 1983. **Maori land and forestry: Development in Taitokerau.** New Zealand Journal of Forestry 28:255-262.
In general "Maori land is owned by groups of specified individuals usually with some kinship links." "It is a responsibility of the forest industry in its actions in the 1980s to ensure that it enhances the development of Maoridom and not assist in its destruction."

3122 Picornell, P.M., 1983. **Appropriate forest industries and their contribution to development.** In: FAO. Report of the FAO/SIDA Consultation on Forest Administration for Development, Rome, Feb., 1983. pp. 97-101.

3123 Tomas, J.G.F., 1983. **Critical aspects of forestry projects for rural development.** In: FAO/SIDA Consultation on Forest Administration for Development, Rome, Feb., 1983. pp. 117-119.

3124 Atmosoedarjo, S., 1982. **Rural community development and its implementation in the forest areas of Indonesia.** In: FAO. Report of the FAO/SIDA Seminar on Forestry Extension, Semarang, Indonesia, 1982. pp. 155-162.

3125 Bachkheti, N.D., 1984. **Social forestry in India: Problems and prospects.** New Delhi, Birla Institute of Scientific Research; Radiant Publishers.152 pp.

3126 Cadelina, R.V., 1984. **Social forestry program prospects and implications on the community and household levels.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:770-781.

The social forestry program in the Philippines is discussed.

3127 Colfer, C.J.P., 1981. **Women, men, and time in the forests of East Kalimantan.** Honolulu, Hawaii, East-West Center, East-West Environment and Policy Institute, Reprint no. 25. 11 pp.

Reprinted from: Borneo Research Bulletin 13(2):75-85, 1981. Discusses forest use and the sexual division of labor in East Kalimantan and the impact of change on the forests and on the position of women.

3128 FAO Forestry Department, 1985. **Forests, trees and people.** Rome, Food and Agriculture Organization of the United Nations, Forestry Topics Report no. 2. 40 pp.

Discusses the needs of rural people in developing countries for fuelwood and charcoal, the benefits and challenge of community forestry, and the FAO's role in forestry for local community development.

3129 Gilmour, D.A., Applegate, G.B., 1984. **Community forestry as an option for containing environmental degradation--a case study from Nepal.** In: Symposium on Effects of Forest Land Use on Erosion and Slope Stability, Honolulu, 1984. Sponsored by IUFRO, East-West Center, New Zealand Forest Service, and U.S. Forest Service. pp. 41-46.

3130 Gilmour, D.A., 1984. **People, forests and erosion--experiences from the middle hills of Nepal.** In: Symposium on Effects of Forest Land Use on Erosion and Slope Stability, Honolulu, 1984. Sponsored by IUFRO, East-West Center, New Zealand Forest Service, and U.S. Forest Service. pp. 15-21.

Attempts at land rehabilitation "must take account of the social framework in which the people live and include local people in the planning and management of any rehabilitation scheme."

3131 Indonesia Ministry of Forestry, 1984. **Social forestry in rural**

**community development in Indonesia.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:629-637.

3132 Jusoh, M.Z., 1984. **Social forestry in Malaysia: Professional education and agroforestry.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:638-646.

3133 Mangoendikoro, A., 1982. **Forestry policy for rural community development in Indonesia.** In: FAO. Report of the FAO/SIDA Seminar on Forestry Extension, Semarang, Indonesia, 1982. pp. 147-154.

3134 Mgeni, A., 1985. **The complexities of community forestry.** Ceres 18(2)(104):19-24.
Discusses various methods or models for community forests.

3135 Orr, B., 1985. **Refugee forestry in Somalia: The step plan generates community involvement.** University of Wisconsin-Madison, Department of Forestry, Staff Paper Series no. 22. 9 pp.
Describes a forestry project initiated in 1982 among the refugees of Somalia to increase the supply of fuelwood and to reverse the deterioration of the environment surrounding the refugee camps. The sponsors of the project wanted direct community participation.

3136 Pardo, R., 1984. **Forestry and "customary land-ownership": Are they compatible?** American Forests 90(10):41, 60-62.
A discussion of forestry and land ownership in Papua New Guinea and Fiji.

3137 Pardo, R.D.,. 1985. **Forestry for people: Can it work?** Journal of Forestry 83:732-741.
The author discusses the costs and benefits of social forestry.

3138 Payuan, E.V., 1984. **Social forestry in the Philippines.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:647-659.

3139 Rice, D., 1984. **Indigenous forest dwellers in forest development planning.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:756-769.
"Indigenous forest dwellers...tend to have a more holistic approach to forest development and planning, and will accomplish viable and sustainable development of the forests if they are given adequate land security and access to technologies." (p. 756)

3140 Shankaranaryan, K.A., 1984. **Social Forestry.** In: Agicultural development and the small farmer, report on the seminar, New Delhi, S. Chand & Co., Ltd. pp. 121-130.
A speech with some discussion.

3141 Sono, P., 1984. **Social forestry technologies.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:625-628.

3142 Tiwari, K.M., 1983. **Forestry for the rural poor.** Indian Forester 109:1-6.

3143 Wiersum, K.F., 1984. **Developing strategies for social forestry: A conceptual approach.** Honolulu, Hawaii, East-West Center, Environment and Policy Institute, Working Paper. 24 pp.

3144 Adeyoju, S.K., 1984. **Some tenurial and legal aspects of agro-forestry.** In: Jackson, J.K., ed. Social, economic, and institutional aspects of agro-forestry. pp. 20-25.

3145 Akachuku, A.E., 1985. **Cost-benefit analysis of wood and food components of agri-silviculture in Nigerian forest zone.** Agroforestry Systems 3:307-316.

3146 Ariki, S., 1985. **The relation between the establishment of the modern forest ownership and the development of Yakihata Ringyo system in Japan.** In: Japanese Forest Economic Society. The current state of Japanese forestry (IV). pp. 136-144.
"Yakihata Ringyo, a combination system of swidden-cultivation and afforestation, belongs to agroforestry of Taungya type and it is a typical form of agroforestry in Japan."

3147 Arnold, J.E.M., 1984. **Economic constraints and incentives in agro-forestry.** In: Jackson, J.K., ed. Social, economic, and institutional aspects of agro-forestry. pp. 3-10.

3148 Chowdhry, K., 1984. **Agroforestry, the rural poor, and institutional structures.** In: Jackson, J.K., ed. Social, economic, and institutional aspects of agro-forestry. pp. 11-19.

3149 Escalante, E.E., 1984. **Considerations of social, economic, institutional, and legal aspects of agro-forestry in Venezuela.** In: Jackson, J.K., ed. Social, economic, and institutional aspects of agro-forestry. pp. 43-45.

3150 Hitzhusen, F.J., Boakye-Dankwa, K., and Veloz, J.A., 1983. **Economics of forests for site protection and energy production in developing countries.** In: Rural development: Growth and inequity. I.A.A.E. Occasional Paper no. 3, pp. 297-301.
"This paper is concerned with financial and economic analysis of forests for site protection and energy production in developing countries. The primary focus is on the Dominican Republic and on the economics of agroforestry and other practices in controlling siltation of hydropower reservoirs." (p. 297)

3151 Hoekstra, D.A. and Gelder, A. van, 1983. **Annotated bibliography of economic analysis of agroforestry systems/technologies.** International Council for Research in Agroforestry, Working Paper no. 10. 44 pp.

3152 Hoekstra, D.A., 1985. **Economic concepts of agroforestry.** International Council for Research in Agroforestry, Working Paper no. 30. 12 pp.

3153 Hoskins, M.W., 1984. **Observations on indigenous and modern agro-forestry activities in West Africa.** In: Jackson, J.K., ed. Social, economic, and institutional aspects of agro-forestry. pp. 46-50.

3154 Huxley, P.A., 1984. **Education for agro-forestry.** In: Jackson, J.K., ed. Social, economic, and institutional aspects of agro-forestry. pp. 26-35.

3155 Jackson, J.K., editor, 1984. **Socia, economic, and institutional aspects of agro-forestry.** Tokyo, United Nations University. 97 pp.
Selected papers have been indexed.

3156 Maydell, H.J. von, 1984. **Agroforestry: The contributions of trees and shrubs to food in the tropics.** Universitas 26:207-215.

3157 Morita, M., 1985. **An essay on the historical and location structure of agroforestry.** In: Japanese Forest Economic Society. The current state of Japanese forestry (IV). pp. 126-135.
The author discusses mainly the "Taungya/Yakihata Ringyo" type of agroforestry.

3158 Nair, P.K.R., 1983. **Multiple land-use and agroforestry.** In: Better crops for food. Ciba Foundation Symposium 97:101-115.

3159 Namura, J., 1984. **A glimpse at agroforestry in Japan.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:676-684.

3160 Olofson, H., 1985. **Traditional agroforestry, parcel management, and social forestry development in pioneer agricultural community: The case of Jala-jala, Rizal, Philippines.** Agroforestry Systems 3:317-337.
"This paper overviews a variety of traditional agroforestry systems found in a small community of Filipino migrant farmers."

3161 Owusu, J.G.K., 1984. **Some policy implications of agro-forestry: A Ghana viewpoint.** In: Jackson, J.K., ed. Social, economic, and institutional aspects of agro-forestry. pp. 51-55.

3162 Poulsen, G., 1985. **Trees on cropland: Preserving an African heritage.** Ceres 18(2)(104):24-28.
Discusses increasing agricultural production while preserving the traditional "close-to-nature" system of tree cover/cropland combinations.

3163 Sheng, T.C., 1984. **Problems of agro-forestry in land-use**

**planning.** In: Jackson, J.K., ed. Social, economic, and institutional aspects af agro-forestry. pp. 89-94.

Agroforestry as a discipline "gives rise to certain problems in land-use planning and policy-making." Among the problems discussed in this paper is that of determining what kind of land should be used for agroforestry.

3164 Torres, F., 1985. **Networking for the generation of agroforestry technologies in Africa.** International Council for Research in Agroforestry, Working Paper no. 31. 24 pp.

Discussion of a proposal to develop four zonal agroforestry research networks, based on four major ecozones in Africa. Their objective would be "to facilitate a co-ordinated cooperation among countries in each ecozone, and between them and external organizations providing technical and financial assistance."

3165 Vergara, N.T. and Nair, P.K.R., 1985. **Agroforestry in the South Pacific region--an overview.** Agroforestry Systems 3:363-379.

3166 Wahab, A.H., Cusumano, V., and Koehler, G.W., 1985. **The USAID agroforestry systems, an alternative to meeting Haiti's food, fiber, and fuel needs.** Caribbean Food Crops Society. Proceedings. 20:301-304.

USAID program was begun in 1981 to encourage small farmers in Haiti to intercrop forest, fruit and food crops. This serves to reforest the island and also to help prevent erosion caused by the deforestation.

3167 Weinstock, J.A., 1984. **Tenure and forest lands in the Pacific.** Honolulu, Hawaii, East-West Center, Environment and Policy Institute, Working Paper. 32 pp.

Discusses the role that tenure plays in forest land use and management across the South Pacific. Uses examples from Papua New Guinea, Fiji, and Tonga. "Target areas of this study are those where agroforestry is presently, or may potentially, be practiced."

3168 Bullard, S.H. and Straka, T.J., 1985. **Business aspects of the Mid-South forest economy.** Mid-South Business Journal 5(2):3-6.
"The Mid-South forest economy is described in two sections: (1) forest resources in general and (2) timber manufacturing or processing. Value added and employment and wages for Mid-South forest industries are considered in the analysis." (p.3)

3169 Corvanich, A., 1984. **The forestry situation in Thailand.** In: Jackson, J.K., ed. Social, economic, and institutional aspects of agro-forestry. pp. 69-71.

3170 Ellefson, P.V., 1985. **Minnesota forestry: Opportunities for the future.** In: Ellefson, P.V. et al., eds. Forest industry as a force in economic development: Options for Minnesota's future. pp. 38-42.

3171 Hultkrantz, L., 1985. **Stagnation eller utveckling i skogsnaringen: En studie av skogsnaringen i Norra Sverige i ett naringspolitiskt perspektiv.** Sveriges Lantbruksuniversitet, Institutionen for Skogsekonomi, Rapport 59. 75 pp. + app.
In Swedish with English summary: "Stagnation or development in the forest sector--a model of the forest sector of the northern part of Sweden and applications to forest policy and industry policy problems."

3172 Lewis, B.J., 1985. **Minnesota's forest-based sector: Review of structure and economic activity.** In: Ellefson, P.V. et al., eds. Forest industry as a force in economic development: Options for Minnesota's future. pp. 43-60.

3173 Randers, J. and Lonnstedt, L., 1982. **Transition strategies for the Scandinavian forest sector.** In: Hewett, C.E. et al., eds. Forests in demand. pp. 85-97.

3174 Reti, I., 1984. **Forestry development in western Somoa.** New Zealand Journal of Forestry 28:423-431.
Discusses the forestry sector including the resource and the industry.

3175 Tasmania Forestry Commission, 1982. **Forestry and forest industry in Tasmania.** Revised, May, 1982. Tasmania Forestry Commission. 16 pp.

3176 Berger, J.L. and Kennedy, J.J., 1983. **Evaluation of a U.S. Forest Service management by objectives training session.** Forest Science 29:241-249.
"The effectiveness of using a management by objectives (MOB) training program to improve U.S. Forest Service administrative functioning is assessed by evaluating such a training session on a California ranger district."

3177 Berkmuller, K., 1984. **Environmental education about the rain forest.** Ann Arbor, University of Michigan, Wildland Management Center; Gland, Switzerland, IUCN Publ. Div. 124 pp.

3178 Consulting Foresters of British Columbia, 1985. **Directory.** Vancouver, Association of B.C. Professional Foresters. Unpaged.

3179 Contado, T.E., 1982. **Pedagogical and didactical aspects of developing an extension programme.** In: FAO. Report of the FAO/SIDA Seminar on Forestry Extension, Semarang, Indonesia, 1982. pp. 175-188.
This paper "is concerned with the teaching and communication aspects of an extension programme."

3180 Courtright, B., 1984. **Excellence in the Forest Service.** Ames Forester 71:8-11.
The author states that "the top management of the Forest Service recognizes the need to communicate a clear vision of excellence to all Forest Service managers." (p. 11)

3181 Irland, L.C., 1984. **Working with the public to create a 'New Forest.'** Forest Industries 111(8):38-39.
The author suggests ways in which professional foresters can improve their image and relationship with the public.

3182 Kennedy, J.J. and Mincolla, J.A., 1985. **Career development and training needs of entry-level wildlife/fisheries managers in the USDA-Forest Service.** Utah State University College of Natural Resources and Agricultural Experiment Station, Career Development Project Report no. 4. 69 pp.

3183 Kennedy, J.J. and Mincolla, J.A., 1985. **Early career development of fisheries and wildlife biologists in two Forest Service regions.** North American Wildlife and Natural Resources Conference, Transactions. 50:425-435.

3184 Kennedy, J.J., 1984. **Understanding professional career evolution--an example of Aldo Leopold.** Wildlife Society Bulletin 12:215-226.

3185 Lantican, D.M., 1984. **Forestry education in the ASEAN Region.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings

3:717-749.

3186 Leuschner, W.A., Impara, J.C., Frary, R.B., and Johnson, E.W., 1985. **The question of credentials.** Journal of Forestry 83:616-622.
"The forestry profession is in the midst of deliberations. Are credential programs desirable for the profession and, if so, which type works best?" (p. 618)

3187 Manandhar, P.K., Pelinck, E., and Gecolea, R.H., 1982. **Extension and training components of community forestry development in Nepal.** In: FAO. Report of the FAO/SIDA Seminar on Forestry Extension, Semarang, Indonesia, 1982. pp. 99-120.

3188 Nosswitz, G., 1984. **Zur Entwicklung der forstlichen Ausbildung in den Vereinigten Staaten von Amerika.** Allgemeine Forst und Jagdzeitung 155:86-88.
In German with French, German, and English summaries. "The development of forest education in the United States of America."

3189 O'Rourke, J.T., 1985. **Range science education for international students: A history of our recommendations.** In: White, L.D. and Tiedeman, J.A., eds. Proceedings of the International Rangelands Resources Development Symposium. pp. 58-72.

3190 Peterson, R.M., 1982. **Forestry and forestry education in North America.** University of Toronto, Faculty of Forestry, Weyerhaeuser Lecture Series 1982. pp. 11-20.

3191 Schmithusen, F., 1983. **Human resources formation: The missing link in forestry development.** In: FAO. Report of the FAO/SIDA Consultation on Forest Administration for Development, Rome, Feb., 1983. pp. 121-143.
One of the purposes of this paper is "to underline the importance of forestry education and training in forest resources management and utilization."

3192 Snarnecchia, D.L., LeMaster, D.C., and Carlson, J.R., editors, 1985. **Range management and livestock production: Development of an integrated curriculum.** Revised edition. Washington State University. 93 pp.
Proceedings of a workshop held May 12-13, 1983, Pullman, Washington. The general objective of the workshop was to develop an undergraduate curriculum in integrated range management and livestock production. Individual papers are not indexed.

3193 Straka, T.J. and Richards, D.P., 1985. **Continuing forestry education: Needs of consulting foresters in Mississippi.** Consultant 30(1):8-10.

3194 Straka, T.J., 1984. **Independent study: A list of opportunities.** Journal of Forestry 82:730-735.
A guide to some of the universities offering independent study opportunities to foresters through correspondence instruction.

3195 Tewari, R.N., 1982. **The role and training of a forest extensionist as related to the introduction and implementation of FLCD activities.** In: FAO. Report of the FAO/SIDA Seminar on Forestry Extension, Semarang, Indonesia, 1982. pp. 129-140.
Discussion of Forestry for Local Community Development.

3196 Trotter, J.A., 1982. **Course planning, management and development.** Rome, Food and Agriculture Organization of the United Nations, Swedish Funds-in-Trust FOR:GCP RAS 066 (SWE). 97 pp.
Cover title: "Report on course planning, management and development at the Centre for Forestry Education Development for the Asia and Southwest Pacific Regions."

3197 Buckman, R.E., 1985. **Forestry research: Investments in information.** In: Ellefson, P.V. et al., eds. Forest industry as a force in economic development: Options for Minnesota's future. pp. 26-28.

3198 Haygreen, J., Gregersen, H., Hyun, A., and Ince, P., 1985. **Innovation and productivity change in the structural panel industry.** Forest Products Journal 35(10):32-38.
"This report concludes that research innovation played an important role in development of the structural wood panel industry and helped to improve productivity in manufacture of structural wood panels." (p. 32)

3199 Resch, H., Blankenhorn, P.R., Haygreen, J.G., and Thompson, W.S., 1985. **Forest products research at U.S. universities in 1982.** Wood and Fiber Science 17:568-584.
"This is a survey of professional staffing, research emphasis, and funding levels of the 37 universities in the United States that conduct forest products research." (p. 568)

3200 Sagl, W., 1984. **Vom Nutzen und Frommen der forstlichen Forschung in Vergangenheit, Gegenwart und Zukunft.** Centralblatt fur das Gesamte Forstwesen 101:81-96.
In German, with English summary: "Efficiency of forest research in the past, presence and future."

3201 Sagl, W., 1985. **Zur Frage von Kosten und Nutzen der wissenschaftlichen Forschung.** Centralblatt fur das Gesamte Forstwesen 102:161-166.
In German with English summary: "Cost-benefit analysis of scientific research." "The fundamental problem of furthering scientific research by governments is to make a selection between different projects."

3202 Steinlin, H., 1983. **The role of research in forestry for development.** In: FAO. Report of the FAO/SIDA Consultation on Forest Administration for Development, Rome, Feb., 1983. pp. 145-156.

3203 Clark, G.C., 1982. **Policies, design and organization of forestry extension programmes.** In: FAO. Report of the FAO/SIDA Seminar on Forestry Extension, Semarang, Indonesia, 1982. pp. 123-128.

"The central theme of this paper is the need to adopt policies and to design and organize forestry extension programmes in such a way as to ensure the full and active participation of the rural people, particularly the disadvantaged rural poor."

3204 Corcoran, T.J. and Schiltz, H.M., 1984. **Information transfer pertaining to cost-efficient wood utilization and salvage strategies for budworm infested timberlands.** University of Maine at Orono, College of Forest Resources. Various pagings.

An annual report prepared for Canada/United States Spruce Budworm Program.

3205 FAO, 1982. **Report of the FAO/SIDA Seminar on Forestry Extension, Semarang, Indonesia, Jan., 1982.** Rome, Food and Agriculture Organization of the United Nations, Swedish Funds-in-Trust FOR:GCPINT 364 (SWE). 192 pp.

"The general objective of the Seminar was to formulate conclusions and recommendations pertaining to the design, organization and implementation of forestry extension programmes geared to promoting and supporting the development of forestry activities concerned with raising living standards of the rural poor." Includes papers presented to the Seminar.

3206 Fletcher, R., 1983. **Educational assistance for woodland owners.** Oregon State University Extension Service. Extension Circular 1154. 4 pp.

Describes the sources available for information and training in woodland management.

3207 Kamino, S., 1985. **System of Japanese forestry extension.** In: Japanese Forest Economic Society. The current state of Japanese forestry (IV). pp. 64-68.

The extension system in Japan was modelled after that of the U.S.

3208 Karamchandani, K.P., 1982. **Extension components of social forestry programmes in Gujarat, India.** In: FAO. Report of the FAO/SIDA Seminar on Forestry Extension, Semarang, Indonesia, 1982. pp. 85-97.

3209 Kronrad, G.D. and Albers, C.A., 1985. **Consultants can help landowners manage for "non-traditional" forest products.** National Woodlands 8(6):8-9.

"Non-traditional" products include: Wildlife, aesthetics and recreation, maple syrup, Christmas trees, and firewood.

3210 Lantican, C.B., 1984. **Extension in forestry development.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:705-713.

3211 Larson, L.K., 1985. **Services to non-industrial private forest owners--a consultant's view.** National Woodlands 8(6):17-18.

3212 Magno, V.C., 1982. **Extension components of small-holder tree farming in the Philippines.** In: FAO. Report of the FAO/SIDA Seminar on Forestry Extension, Semarang, Indonesia, 1982. pp. 75-84.

3213 Moody, C.W., 1984. **State service forestry--where national and individual goals meet.** Forest Farmer 43(9):28-29.

3214 Robinette, A., 1985. **Information management: Forestry opportunities.** In: Ellefson, P.V. et al., eds. Forest industry as a force in economic development: Options for Minnesota's future. pp. 21-25.

3215 Shearer, M. and Fletcher, R., 1983. **Technical assistance in forestry.** Oregon State University Extension Service, Extension Circular 1120. 4 pp.
This circular describes the types of services available to Oregon woodland owners and the agencies that offer them.

3216 Stymne, B., 1983. **The role and structure of forestry extension.** In: FAO. Report of the FAO/SIDA Consultation on Forest Administration for development, Rome, 1983. pp. 157-163.

3217 U.S. Forest Service, 1985. **National Information Requirements Project.** U.S. Forest Service. 140 pp.
This report documents the efforts of the Forest Service to examine its information requirements. It is in two parts: (1) the National Information Requirements, (2) the Coding Structure for activity and fund codes.

3218 Wagar, J.A. and Twight, B.W., 1984. **Communication and public involvement.** In: Wenger, K.F., ed. Forestry handbook. pp. 1215-1236.

3219 Allen, J.C., 1983. **Deforestation, soil degradation, and wood energy in developing countries.** Ph.D. thesis, Johns Hopkins University; Ann Arbor, Mich., University Microfilms International. 153 pp. + appendices.

Section one deals with deforestation and soil degradation in the U.S. and the Tropics. Section two deals with planning fuelwood plantations in Tanzania.

3220 Bajracharya, D., 1983. **Deforestation in the food/fuel context: Historical and political perspectives from Nepal.** Mountain Research and Development 3:227-240.

"The thesis of this paper is that the primary cause of deforestation in Nepal is the clearing of forests to increase land for agriculture and fodder, and not...the need for fuelwood." "The second part of the paper focuses on post-1950 government policies designed to conserve forest resources."

3221 Campbell, J., 1983. **Ecology in the eighties--excellence in Britain's forestry.** Commonwealth Forestry Review 62:243-249.

"Developed nations, such as Britain, have a responsibility to increase their self sufficiency in timber and wood products, relieving pressure on the forests of developing nations." (p. 243)

3222 Eckerberg, K., 1983. **A land use conflict--environmental consideration in forestry.** Sveriges Lantbruksuniversitet, Institutionen for Skogsekonomi, Rapport 42. 14 pp.

3223 Eckerberg, K., 1984. **Three cases of forestry clear-cuttings--an analysis of the field level implementation of the Swedish Forestry Act regulation on environmental protection.** Sveriges Lantbruksuniversitet, Institutionen for Skogsekonomi, Rapport 51. 24 pp. + app.

Paper prepared for the Nordic Political Science Association's Congress in Lund, Aug. 20-22, 1984, and the Conference of European Group of Public Administration in Dublin, Sept. 3-5, 1984.

3224 Fearnside, P.M., 1983. **Land-use trends in the Brazilian Amazon region as factors in accelerating deforestation.** Environmental Conservation 10:141-148.

"Forms of development currently increasing in the Brazilian Amazon region allow a small population to exert a great impact on the region's rain forest. Trends in land-use are a significant factor in deforestation, along with the explosive growth of the region's human population...." (p. 141)

3225 Fraser, G.A. et al., 1985. **The potential impact of the long range transport of air pollutants on Canadian forests: Report of a scientific opinion survey.** Canadian Forestry Service,

Economics Branch, Information Report E-X-36. 43 pp.
Co-authors are: W.E. Phillips, G.W. Lamble, G.D. Hogan, and A.G. Teskey. "Expert opinion was solicited on the nature and extent of forest productivity change and the likelihood of alternative forest productivity effects under several different pollution scenarios."

3226 Geppert, R.R., Lorenz, C.W., and Larson, A.G., editors, 1984. **Cumulative effects of forest practices on the environment: A state of the knowledge.** Olympia, Wash., Ecosystems, Inc. 208 pp. + app.
Prepared for the Washington Forest Practices Board.

3227 Hyde, W.F., 1983. **Development vs. preservation in public resource management: A case study from the timber-wilderness controversy.** Journal of Environmental Management 16:347-355.
"This paper examines some of the best publicly managed timberland in the country (U.S.) and concludes that outdated biological constraints on timber management are a much greater cause of welfare loss than potential preservation for environmental values." (p. 347)

3228 Lovejoy, D., 1983. **Trees, landscape and conservation: A report to highlight Britain's tree needs in relation to conservation.** London, Tree Council. 14 pp.
The paper "outlines the situation in Britain against the broader world problems of timber use and de-forestation in certain tropical areas."

3229 Netter, T.W., 1985. **Vietnam's deforestation.** Philippine Lumberman 31(6):26-27, 38
Reprinted from New York Times, May 21, 1985.

3230 Remrod, J. and Lindevall, B., 1985. **Forest in danger.** Djursholm, Swedish Forestry Association. 24 pp.
An illustrated booklet outlining the danger to Swedish forests from air pollution.

3231 Reyes, M.R., 1985. **The human factor in forest denudation.** Philippine Lumberman 31(4):17, 24.

3232 Roelle, J.E. et al., 1984. **A framework for assessing the impacts of acidic deposition on forest and aquatic resources: Results of a workshop for the National Acid Precipitation Assessment Program, Leetown, WV, 1983.** U.S. Fish and Wildlife Service, Division of Biological Services, FWS/OBS-84/16. 80 pp.
"The National Acid Precipitation Assessment Program has planned a series of assessments to analyze the costs and benefits of various approaches to deal with the impacts of acidic deposition..." Co-authors are: A.K. Andrews, G.T. Auble, D.B. Hamilton, R.J. Johnson, and J.F. Sisler.

3233 Society of American Foresters, 1984. **Acidic deposition and forests.** Bethesda, MD, Society of American Foresters. 48 pp.
Includes: Position statement of the SAF, and Report of the SAF Task Force on the Effects of Acidic Deposition on Forest Ecosystems.

SOCIAL SCIENCES APPLIED TO FOREST MANAGEMENT

GENERAL

3234 Bentley, W.R., Countryman, D.W., and Marchetta, J.S., 1984. **Management of people.** In: Wenger, K.F., ed. Forestry handbook. pp. 1179-1214.

3235 Boothby, R.D. and Buongiorno, J., 1985. **UNEVEN: A computer model of uneven-aged forest management.** University of Wisconsin, Dept. of Forestry R-3285.
"UNEVEN can help to predict how a particular uneven-aged stand will develop under varying assumptions regarding how and when the stand is cut. It can also calculate how much the stand will produce and the economic value of that production." (p. 1)

3236 Haley, D., 1985. **The forest tenure system as a constraint on efficient timber management: Problems and solutions.** Canadian Public Policy. II Supplement, pp. 315-328.
This paper focuses on a concern of the Economic Council of Canada: "The arrangement for granting rights to harvest public timber." Also examined is "the influence of forest land tenure on resource management...with particular reference to British Columbia. (p. 315)

3237 Lawrence, W.H. and Kulp, J.L., 1983. **Opportunities in forest management.** In: Moore, M.D., ed. Proceedings of...Conference on Forest Resources, Michigan State University, 1983. pp, 16-19.
Forest management opportunities in Michigan.

3238 Leuschner, W.A., 1984. **Introduction to forest resource management.** New York, Wiley. 298 pp.
Includes sections on "forest valuation," "traditional forest regulation," and "present and future management techniques."

3239 Nagumo, H., 1985. **The development of forest management in Japan with special reference to shifting cultivation.** In: Japanese Forest Economic Society. The current state of Japanese Forestry (IV). pp. 101-125.
Shifting cultivation is no longer practiced in Japan, but before World War II it was very common.

3240 Nautiyal, J.C., 1983. **Towards a method of uneven-aged forest management based on the theory of financial maturity.** Forest Science 29:47-58.
"A framework for management of uneven-aged forests, based on the concept of optimal economic rotation of even-aged crops, has been presented."

3241 Velin, J.R., 1983. **Forest management in Minnesota.** In: Moore, M.D., ed. Proceedings of...Conference on Forest Resources, Michigan State University, 1983. pp. 41-45.

Discusses the role of the Legislative Commisssion on Minnesota Resources in forest management in Minnesota.

3242 Brewer, J.E., 1985. **National forest programs: Timberland strategies.** In: Ellefson, P.V. et al., eds. Forest industry as a force in economic development: Options for Minnesota's future. pp. 36-38.

3243 DeByle, N.V., 1985. **Management for esthetics and recreation, forage, water, and wildlife.** In: Aspen: Ecology and management in the western United States. U.S. Forest Service, Gen. Tech. Rep. RM-119:223-232.

"Aspen has qualities that make it relatively easy to manage for both consumptive uses and for esthetics."

3244 Hosteland, J.E., 1982. **Maintaining resource use at sustainable levels.** In: Hewett, C.E. et al., eds. Forests in demand. pp. 77-83.

3245 Johnson, R.R. et al., tech. coord., 1985. **Riparian ecosystems and their management: Reconciling conflicting uses. [Proceedings] First North American Riparian Conference, Tucson, 1985.** U.S. Forest Service, Gen. Tech. Rep. RM-120. 523 pp.

105 paper are included. Selected paper are indexed in this issue of SSF. Technical coordinators of the Conference were R.R. Johnson, C.D. Ziebell, D.R. Patton, P.F. Ffolliott, and R.H. Hamre.

3246 Kennedy, J.J., 1985. **Conceiving forest management as providing for current and social value.** Forest Ecology and Management 13:121-132.

"This paper emphasizes the role of planning and management in providing for forest social values to current and future citizens." "...it examines how forest values originate in society and are expressed to forest managers."

3247 Sedjo, R.A., 1985. **Commercial forests, environmental values and alternative land uses: Conflicts and complementarities.** Paper delivered to Symposium on Effective Use of Forest Resources in the Preservation of the Environment, Tokyo, April, 1985. 5 pp.

3248 Stephens, R.J., 1984. **Forestry or a national park: A New Zealand case study.** International Journal of Social Economics 11(3/4):29-44.

Two government departments have recommened the same land for different uses--one proposes the land be used for a national park and one proposes the timber on the land be cut for lumber. This study looks at an economic evaluation of the proposals.

3249 Stern, R.C., 1985. **Treatment of woodland for non-timber**

**benefits in South East England.** Forestry 58:205-211.

3250 Vanderheyden, J., 1985. **Managing multiple resources in western Cascades forest riparian areas: An example.** In: Johnson, R.R. et al., tech coord. Riparian ecosystems and their management. pp. 448-452.

3251 Wilkinson, C.F., 1985. **"The greatest good for the greatest number in the long run": The national forests in the next generation.** Colorado State University, College of Forestry and Natural Resources, 1985 Natural Resources Days Keynote Address. 12 pp.

The quote in the title is from a letter written by Gifford Pinchot in 1905.

## PUBLIC LANDS

3252 Collins, A.R. and Bradley, E.B., 1984. **Historical and political perspectives on selling the public domain.** Rangelands 6:158-160.

3253 Mead, W.J., Moseidjord, A., and Muraoka, D.D., 1983. **Managing public lands: The economic perspective.** Western Wildlands 9(3):12-15.

3254 Stewart, P.J., 1985. **The dubious case for state control.** Ceres 18(2)(104):14-19.

Discusses the benefits of state controlled forests versus private ownership and concludes a flexible and many sided approach as the best solution.

3255 U.S. Bureau of Land Management, 1984. **Managing the nation's public lands, fiscal year 1984.** U.S. Bureau of Land Management. 63 pp.

A report to Congress for the period Oct. 1, 1983 to Sept. 30, 1984.

3256 Vogel, J.L., 1985. **County-administered forestry programs: Timberland strategies.** In: Ellefson, P.V. et al., eds. Forest industry as force in economic development: Options for Minnesota's future. pp. 30-32.

There are 2.3 million acres of county-administered commercial forest land in Minnesota.

3257 Wayburn, E., 1984. **Alaska's public lands: Lax enforcement undermines ANILCA.** Sierra 69(3):19-22.

Discusses implementation of the Alaska National Interest Lands Conservation Act of 1980.

3258 Birch, T.W., 1984. **Private forest-land owners of New York.** National Woodlands 7(5):8-10.

3259 Bullard, S.H., Weaver, G.H., and VanHees, W.W.S., 1984. **Mississippi's long-run softwood timber potential: Private nonindustrial influences.** Mississippi Agricultural and Forestry Experiment Station, Information Bulletin no. 56. 6 pp.

3260 Cubbage, F.W. and Skinner, T.M., 1985. **Industrial forest management assistance and leasing: 1983 programs and accomplishments in Georgia.** Southern Journal of Applied Forestry 9:217-222.

The study concluded that "overall, forest industry leasing and management assistance programs do have a significant impact on management of NIPF lands."

3261 Hilliard-Clark, J. and Chesney, C.E., 1985. **Black woodland owners: A profile.** Journal of Forestry 83:674-679.

A study of black woodland owners in North Carolina.

3262 Jackson, J.P., 1984. **Nonindustrial private forests: New look at an old problem.** American Forests 90(2):25-27, 54.

Reports on a NIPF forum held in St. Louis in Nov., 1983.

3263 Jarvelainen, V.-P., Riihinen, P., Uotila, E., and Vesikallio, H., 1983. **Kaupunkilaismetsanomistajat puun myyjinä ja kasvattajina: Suur-Helsingin alueella ja Tampereella asuvia metsanomistajia koskeva haastattelututkimus.** Helsingin Yliopiston Kansantaloudellisen Metsaekonomian Laitos, Tiedonantoja no. 7. 28, 28 pp. + tables.

In Finnish with English summary. "The goals set on forest ownership by forest owners living in large cities, as well as their forestry behaviour, is examined in the study."

3264 Lonnstedt, L., 1985. **De enskilda skogsagarnas avverkningsintensitet--analys av en intervjuundersokning.** Sveriges Lantbruksuniveritet, Institutionen for Skogsteknik, Rapport nr. 165. 56 pp. + tables.

In Swedish, with English summary: "Cutting intensity of non industrial private forest owners--analysis of an interview investigation." "The aim of the report is to identify groups of non industrial private forest owners with different cutting intensity."

3265 Lonnstedt, L., 1985. **Funderingar kring de enskilda skogsagarnas avverkningsintensitet.** Sveriges Lantbruksuniversitet, Institutionen for Skogsteknik, Rapport nr. 164. 52 pp.

In Swedish with English summary: "Thoughts on private forest owners' cutting propensity."

3266 Palmer, M.A., Doolittle, M.L., Straka, T.J., and Weaver, G.H., 1985. **Socioeconomic characteristics, adoption of innovations and nonindustrial private forest regeneration.** Mississippi Agricultural and Forestry Experiment Station, Information Bulletin no. 72. 44pp.

"The purpose of this study was to establish how NIPF landowners who regenerate their pine stands differ from NIPF landowners who do not. Other objectives were to determine whether owners who regenerate are more innovative as a group than those who do not regenerate and to test the power of the diffusion model for this population of NIPF landowners." (p.5)

3267 Skinner, T.M. and Cubbage, F.W., 1985. **A survey of industrial forest management assistance and leasing programs for nonindustrial private forests in Georgia.** University of Georgia, College of Agriculture, Experiment Stations, Research Report no. 470. 30 pp.

"This paper summarizes the results of a study of forest industry management assistance programs and leases and their impact on NIPF's in 1983 for the state of Georgia." (p. 1)

3268 Tasmania Forestry Commission, 1982. **Attitudes of Tasmanian forest owners to native forest management: Report on a survey of forest owner's intentions.** Tasmania Forestry Commission. 33 pp. + app.

3269 Young, R., Reichenbach, M., and Perkuhn, F., 1984. **A survey of private non-industrial forest owners in Illinois: A preliminary report.** Illinois Agricultural Experiment Station, Forestry Research Report no. 84-2. 5 pp.

3270 Ager, B., Almquist, R., Brinnen, U., and Ponten, B., 1984. **Unga skogsarbetares arbetsanpassning och arbetsforhallanden.** Sveriges Lantbruksuniversitet, Institutionen for Skogsteknik, Rapport nr. 160. 65 pp. + tables.
In Swedish with English summary: "Young forest worker's working conditions and adaptation to work."

3271 Ager, B., editor, 1980. **Proceedings IUFRO Seminar Design of Work Systems in Forestry--With Special Regard to Psychosocial Aspects, Garpenberg, Sweden, Sept. 21-26, 1980.** International Union of Forestry Research Organizations. 234 pp.
A seminar about the psychological and social aspects of forest work. Selected papers are indexed.

3272 American Pulpwood Association Inc., 1985. **Safe and efficient logging crew study.** Augusta, Maine, American Pulpwood Association Inc., Northeastern Technical Division, Safety Subcommittee, 85-A-5. 3 pp. + app.
The purpose of the study was to "establish characteristics common to the high production crews studied and to provide some clues as to whether high productivity and high injury rates are necessarily linked together."

3273 Bostrand, L., 1980. **Job satisfaction of logging machine operators in Sweden.** In: Ager, B., ed. Proceedings IUFRO Seminar Design of Work Systems in Forestry. pp. 35-46.

3274 Bostrand, L., 1984. **Produktionsteknik och arbetsmiljo--En studie av skogsmaskinforares arbetsforhallanden 1969-81.** Sveriges Lantbruksuniversitet, Institutionen for Skogsteknik, Rapport nr. 159. 133 pp. + tables.
In Swedish with English summary: "Production techniques and work environment--A study on forest machine operator's work conditions 1969-81."

3275 Bostrand, L., 1980. **Social effects of shift work in forestry.** In: Ager, B., ed. Proceedings IUFRO Seminar Design of Work Systems in Forestry. pp. 78-84.

3276 Enarson, E., 1984. **Women and men at work: Sexual integration on the Lolo National Forest.** University of Montana, Department of Sociology. 52 pp.
51 interviews were conducted in 1984 with both permanent and seasonal field workers as well as office workers. Issues raised included sex stereotyping and tokenism, workplace culture and sexual harassement, work commitment and alienation.

3277 Enarson, E.P., 1985. **Women and men at work: Sexual integration on the Lolo National Forest.** Women in Forestry 7(3):11-16.

3278 Fibiger, W., 1980. **Some methodological problems of mental workload evaluation.** In: Ager, B., ed. Proceedings IUFRO Seminar Design of Work Systems in Forestry. pp. 168-205

3279 Frykman, B., 1980. **Studies on autonomy and work organisation of logging crews in Sweden.** In: Ager, B., ed. Proceedings IUFRO Seminar Design of Work Systems in Forestry. pp. 53-77.

3280 Frykman, B., 1980. **Supervision in forestry.** In: Ager, B., ed. Proceedings IUFRO Seminar Design of Work Systems in Forestry. pp. 107-118.

3281 Garland, J.J., 1984. **Perspectives on the logging labor force: Selection, training, and motivation.** In: Robertson, D. and White, J. People and productivity. pp. 7-29.
This paper "describes certain viewpoints of the logging labor force by management, supervisors, and coworkers."

3282 Henderson, M., 1980. **The future for research based work design in Australian logging.** In: Ager, B., ed. Proceedings IUFRO Seminar Design of Work Systems in Forestry. pp. 149-167.
"A framework for understanding the development of inter-Nordic ergonomic research is proposed. The levels and various aspects of work design in Australian logging are detailed."

3283 Johansson, G., 1980. **Stress-strain at work--general knowledge and aspects.** In: Ager, B., ed. Proceedings IUFRO Seminar Design of Work Systems in Forestry. pp. 17-25.

3284 Kakizawa, H., 1985. **Studies on the present stage of forestry in Hokkaido and the labour structure of logging industries and afforestation contractors.** Hokkaido University, College Experiment Forests, Research Bulletins 42:443-500.
In Japanese with English summary.

3285 Nugent, J.D., 1980. **Democracy at work--the developemnt of a skills training program for forest workers.** In: Ager, B., ed. Proceedings IUFRO Seminar Design of Work Systems in Forestry. pp. 125-131.
Describes the development of a skills training program in Ontario involving workers, employers, a community technical college, and safety professionals, to reduce injuries to forest workers engaged in the process of felling trees.

3286 Nugent, J.D., 1985. **Ergonomics and safety on silviculture and reforestation operations.** In: Proceedings of the 1984 Mechanized Silviculture Workshop. Northern Forest Research Centre, Information Report NOR-X-272. pp. 22-24.

3287 Ockert, R.A., 1985. **Forestry labor: Commitments for encouraging development.** In: Ellefson, P.V. et al., eds. Forest industry

as a force in economic development: Options for Minnesota's future. pp. 12-13.
The author is with the International Woodworkers of America.

3288 Robertson, D. and White, J., 1984. **People and productivity: Keys to a successful harveting operation.** Madison, Wis., Forest Products Research Society, Proceedings 7305. 137 pp.
Papers for this proceedings were presented at a conference sponsored by the FPRS in cooperation with the Canadian pulp and Paper Assoc. in Thunder Bay, Ontario, Sept. 17-18, 1984. D. Robertson was proceedings coordinator and J. White was editorial assistant.

3289 Teikari, E., 1980. **Methods for measuring job satisfaction.** In: Ager, B., ed. Proceedings IUFRO Seminar Design of Work Systems in Forestry. pp. 220-228.

3290 Wenter, W., 1985. **Basic information on work organization, data collection, ergonomics and safety at work.** In: FAO. Logging and transport in steep terrain. FAO Forestry Paper no. 14, rev. 1. pp. 303-318.

3291 Armson, K.A., 1985. **Fire and forest management.** In: Stocks, B.J. et al., cochair. Forest Fire Management Symposium, 1984. Proceedings. pp. 36-39.
"The uses of fire in forest management are discussed both historically and in terms of the present situation in Ontario."

3292 Barney, R.J. et al., 1984. **Fire management.** In: Wenger, K.F., ed. Forestry handbook. pp. 189-251.

3293 Bishop, R. and Dasti, D., 1985. **Fire prevention and forest operations.** In: Stocks, B.J. et al., cochair. Forest Fire Management Symposium, 1984. Proceedings. pp. 64-70.
"This paper focuses on cooperative efforts between the Ontario Ministry of Natural Resources and industry to prevent fires on valuable forest lands."

3294 Butts, D.B., 1985. **Fire policies and programs for the National Park System.** Fire Management Notes 46(3):11-17.

3295 Cohan, D., Haas, S., and Roussopoulos, P.J., 1983. **Decision analysis of silvicultural prescriptions and fuel management practices on an intensively managed commercial forest.** Forest Science 29:858-870.
"In this paper, a situation involving relatively high fire danger and high timber values that are sensitive to fire damage is examined to illustrate decision analytic methods for evaluating fuel treatments in concert with silvicultural decisions." (p.859)

3296 Corcoran, T.J., Cameron, M.L., and Fosbroke, D.E., 1984. **Better management and utilization techniques to reduce loss from spruce budworm attack.** University of Maine at Orono, College of Forest Resources. 27 pp. + appendices.
A final report prepared for Canada/United States Spruce Budworms Program. "One objective of this project was to provide information about the spruce budworm and its management to the public and small landowners."

3297 Dube, D.E., compiler, 1985. **Proceedings of the Intermountain Fire Council 1983 Fire Management Workshop.** Northern Forest Research Centre, Information Report NOR-X-271. 93 pp.
Various fire management topics were covered, including the economic impact of forest fires, and the political implications. Selected articles have been indexed.

3298 Edwards, P.J., 1984. **The use of fire as a management tool.** In: Booysen, P. de V. and N.M. Tainton, eds. Ecological effects of fire in South African ecosystems. New York, Springer-Verlag. pp. 349-362.

3299 Flowers, P.J., Vaux, H.J., Jr., Gardner, P.D., and Mills, T.J., 1985. **Changes in recreation values after fire in the northern Rocky Mountains.** U.S. Forest Service, Research Note PSW-373. 6 pp.

"The results suggest that net value changes in recreation resources are generally low, and possibly insignificant in economic efficiency analysis of fire management programs."

3300 Frandsen, O.A., 1985. **Fire as a management tool in southeast Idaho--a case study.** In: Rangeland Fire Effects: A Symposium. U.S. Bureau of Land Management, Idaho State Office. pp. 85-87.

Bureau of Land Management policy allows use of prescribed burning.

3301 Fullerton, J.M. and Martell, D.L., 1985. **Decision analysis for prescribed burn planning.** In: Stocks, B.J. et al., cochair. Forest Fire Management Symposium, 1984. Proceedings. pp. 88-91.

"Decision analysis techniques were used to develop a planning methodology for evaluating forest site preparation...regeneration...and tending strategies."

3302 Gagnon, P.R. and Kincaid, R., 1985. **Determining forest values and strategic fire response for the northwestern region of Ontario.** In: Stocks, B.J. et al., cochair. Forest Fire Management Symposium, 1984. Proceedings. pp. 57-63.

3303 Goodman, J.F., 1985. **Realities of managing fire in Ontario.** In: Stocks, B.J. et al., cochair. Forest Fire Management Symposium, 1984. Proceedings. pp. 49-56.

"Ontario's new forest fire management policy and centralized forest fire management organization are introduced, and fire and prescribed burn activities of the past 10 years are discussed briefly."

3304 Hall, M., 1984. **Man's historical and traditional use of fire in Southern Africa.** In: Booysen, P. de V. and N.M. Tainton, eds. Ecological effects of fire in South African ecosystems. New York, Springer-Verlag. pp.39-52.

3305 Harjula, A.M., 1985. **Fire management in Quetico Provincial Park.** In: Stocks, B.J. et al., cochair. Forest Fire Management Symposium, 1984. Proceedings. pp. 26-30.

"Fire is an important element in managing wilderness parks such as Quetico Provincial Park."

3306 Huff, J.D., Montgomery, B.A., Witter, J.A., and Gregory, G.R., 1984. **The economics of spruce budworm outbreaks in the Lake States: An overview.** Great Lakes Entomologist 17:239-253.

"Outbreaks result in short-run supply shifts which probably decrease total revenue to stumpage owners but do not affect demand. The magnitude of long-run impacts were

dependent on developing Lake States markets and forest management techniques." (p.239)

3307 Johnson, E.A. and Van Wagner, C.E., 1985. **The theory and use of two fire history models.** Canadian Journal of Forest Research 15:214-220.
"The objective of this paper is to explain the distributions, assumptions, and relationships of the two compatible stochastic models of fire history: The negative exponential and the Weibull." (p.214)

3308 Lockhart, D.D., 1985. **Protecting the forests of New Brunswick against "the insect"--an overview.** Forestry Chronicle 61:382-384.
Without a program of protection against the spruce budworm, "the forest products industry in New Brunswick would have suffered many mill closures...."

3309 Lombard, M., 1984. **Fire as a management tool.** In: U.S. BLM. The Taylor Grazing Act, 1934-1984. pp. 42-43.

3310 Loomis, R.C., Tucker, S., and Hofacker, T.H., editors, 1985. **Insect and disease conditions in the United States 1979-83: What else is growing in our forests?** U.S. Forest Service, Gen. Tech. Rep. WO-46. 93 pp.
"This report gives a broad perspective on the status of several destructive forest pests." Damages caused have been calculated, information on the history of the pest, resources affected, and the current prevention/suppression strategies is provided.

3311 Lopoukhine, N. and White, C., 1985. **Fire management options in Canada's national parks.** In: Dube, D.E., comp. Proceedings of the Intermountain Fire Council 1983 Fire Management Workshop. pp. 59-68.

3312 Lynham, T.J., 1985. **History and natural role of fire in Ontario.** In: Stocks, B.J. et al., cochair. Forest Fire Management Symposium, 1984. Proceedings. pp. 43-48.

3313 Mercier, J.-C., 1985 **Protection of the forest: A social and economic imperative.** Forestry Chronicle 61:378-381.
The author argues that investments in the forest products sector in Quebec cannot be made without adequate protection programs.

3314 Mills, T.J. and Flowers, P.J., 1985. **Estimating fire-induced net value change in resource outputs.** In: Dube, D.E., comp. Proceedings of the Intermountain Fire Council 1983 Fire Management Workshop. pp. 5-12.
"Estimates of the fire-induced changes in the net value of resource outputs are needed in analyzing the economic

efficiency of fire management program options."

3315 Mills, T.J. and Flowers, P.J., 1985. **Fire-induced changes in net value of timber: A sensitivity analysis.** Canadian Journal of Forest Research 15:973-981.
"This paper documents the pattern of timber net value change as it varies with fire site, fire severity, and timber management objectives of the fire situation." "The relationship between timber net value change and characteristics of the fire situation is basic to the development of economically efficient fire management programs." (p. 973)

3316 National Wildfire Coordinating Group, 1984. **The National Interagency Incident Management System--teamwork in emergency management.** U.S. Department of Agriculture; U.S. Department of the Interior; National Association of State Foresters. 16 pp.
"The National Interagency Incident Management System (NIIMS) was designed by a group of local, State and Federal agencies with fire protection responsibilities to improve the ability of fire protection forces to respond to any type of emergency."

3317 Richards, N.R., 1985. **Fire management in wilderness and nature reserves within Ontario's provincial parks system.** In: Stocks, B.J. et al., cochair. Forest Fire Management Symposium, 1984. Proceedings. pp. 20-25.

3318 Roby, G. et al., 1984. **Long-term fire retardant value analysis guidelines.** U.S. Forest Service, Aviation and Fire Management. 14 pp.
Prepared by a National Ad Hoc Committee composed of G. Roby, D. Aldrich, W. Eddy, W. Tomascak, R.W. Weaver, P.R. Hill, and C. George.

3319 Roseborough, J.D. and Post, L.J., 1985. **Fire management and wildlife policy.** In: Stocks, B.J. et al., cochair. Forest Fire Management Symposium, 1984. Proceedings. pp. 7-10.
The authors stress the importance of balancing "the values to be protected from fire with the wildlife values to be derived from fire."

3320 Rumpf, T.A., 1985. **Maine's spruce budworm policy.** Forestry Chronicle 61:385-387.

3321 Scott, J.D., 1984. **An historical review of research on fire in South Africa.** In: Booysen, P. de V. and N.M. Tainton, eds. Ecological effects of fire in South African ecosystems. New York, Springer-Verlag. pp. 53-65.

3322 Smith, C.B., 1985. **Political implications of fire management.** In: Dube, D.E., comp. Proceedings of the Intermountain Fire

Council 1983 Fire Management Workshop. pp. 19-24.

3323 Stimson, P. and Whitson, J., 1985. **The ICS planning process.** Fire Management Notes 46(3):7-8.
The Incident Command System (ICS) planning process "provides for a timely, efficient, and easily documented series of events leading to an incident action plan that can be applied to any kind of emergency."

3324 Stocks, B.J., Elliott, R.G., and Walker, J.D., chairmen, 1985. **Forest Fire Management Symposium, Sault Ste. Marie, Ontario, 1984: Proceedings.** Great Lakes Forest Research Centre, Canada-Ontario Joint Forestry Research Committee, COJFRC Symposium Proceedings O-P-13. 125 pp.
Symposium cosponsored by Ontario Ministry of Natural Resources and Great Lakes Forest Research Centre under the auspices of COJFRC. The theme of the symposium was "Integrating fire and forest resource management in Ontario."

3325 U.S. Forest Service, 1985. **National forest fire report 1984.** U.S. Forest Service. 49 pp.
Includes statistics on total wildfires and acres burned, personnel employed on fire management acitvities, area burned and damaged by region and state, etc.

3326 VanWagner, C.E., 1985. **Fire, harvesting, and timber supply.** In: Stocks, B.J. et al., cochair. Forest Fire Management Symposium, 1984. Proceedings. pp. 71-76.
Discussion of two questions: (1) How does forest fire affect timber supply? and (2) How can the value of fire control activity be judged?

3327 VanWagner, C.E., 1985. **The economic impact of forest fire.** In: Dube, D.E., comp. Proceedings of the Intermountain Fire Council 1983 Fire Management Workshop. pp. 13-18.
Economic analysis of fire's impact on the forest industry.

3328 Williams, J.R., 1985. **A private landowner perspective of state policy, economics and responsibility in spruce budworm control.** Forestry Chronicle 61:388-393.
Discusses the spruce budworm control program of the International Paper Co. in Maine. "Various economic and legal considerations with benefit/cost ratios from protection are described."

3329 Albrecht, J. and Knopp, T.B., 1985. **Off road vehicles--environmental impact--management response: A bibliography.** University of Minnesota, Agricultural Experiment Station, Miscellaneous Publication no. 35. 50 pp.

3330 Albrecht, J. and Knopp, T.B., 1984. **Trail planning, construction, and maintenance: A bibliography.** University of Minnesota, Agricultural Experiment Station, Miscellaneous Publication no. 26. 68 pp.

Includes a section on municipal, state, regional, and federal planning documents.

3331 Amirfathi, P., Narayanan, R., Bishop, A.B., and Larson, D., 1985. **A methodology for estimating instream flow values for recreation.** Utah State University, Utah Water Research Laboratory. UWRL/P-85/01. 66 pp.

A representative sample of 500 recreationists at three river sites were interviewed during the summer of 1982, to estimate empirical demand equation for recreation activities. (p. iii)

3332 Anderson, L.M., ed., 1985. **Proceedings Southeastern Recreation Research Conference 1984 Presented Paper Session.** University of Georgia, Institute for Behavioral Research. 74 pp.

3333 Becker, R.H., 1983. **Opinions about clear-cutting and recognition of clear-cuts by forest recreation visitors.** Journal of Environmental Management 17:171-177.

"This paper addresses the issue of relating opinions of forest recreation visitors toward clear-cutting with knowledge and recognition of clear-cuts."

3334 Behrens-Tepper, J.C., O'Leary, J.T., and Andersen, D.C., 1985. **Focused recreation use in riparian ecosystems: A taxonomy of user types.** In: Johnson, R.R. et al., tech. coord. Riparian ecosystems and their management. pp. 216-218.

"...this paper examines Indiana anglers by amount of participation at rivers and streams, sociodemographic background and conservation activity involvement."

3335 Buchanan, T., 1985. **Commitment and leisure behavior: A theoretical perspective.** Leisure Sciences 7:401-420.

"The contribution of integrating the concept of commitment into research regarding conflict, substitution, recreation specialization, and leisure social worlds is identified and discussed."

3336 Burch, W.R., Jr., 1982. **The social meanings of forests.** In: Hewett, C.E. et al., eds. Forests in demand. pp. 51-59.

3337 Burde, J.H. and Curran, K.A., 1984. **Unobtrusive observation in recreation research: An application.** In: Peine, J.D., editor. Proceedings of a Workshop on Unobtrusive Techniques to Study Social Behavior in Parks, 1983. pp. 50-53.

3338 Burrus-Bammel, L.L. and Bammel, G., 1984. **Applications of unobtrusive methods.** In: Peine, J.D., editor. Proceedings of a Workshop on Unobtrusive Techniques to Study Social Behavior in Parks, 1983. pp. 6-19.

3339 Chilman, K.C., Foster, D., and Everson, A., 1985. **Using visitor perceptions in river use planning, 1972-1984.** In: Johnson, R.R. et al., tech. coord. Riparian ecosystems and their management. pp. 393-397.

This paper discusses the river use planning situation at Ozark National Scenic Riverways, how visitor perception data have been obtained, and how these data have been useful in carrying capacity planning. (p. 393)

3340 Clark, R.N., 1984. **Alternative strategies for studying recreationists.** In: Machlis, G.E. and Field, D.R., eds. On interpretation. pp.23-41.

"This article describes alternatives to the traditional cross-sectional survey and presents a framework for selecting when a specific data collection strategy may be appropriate or inappropriate."

3341 Cole, D. and Benedict, J., 1983. **Wilderness campsite selection--what should users be told.?** Park Science 3(4):5-7.

"The only real means of avoiding both resource damage and irksome restrictions is to increase public awareness of the nature and importance of campsite impacts and the means for minimizing damage." (p. 5)

3342 Cordell, H.K. and English, D.B.K., 1985. **Recreational travel distances to define supply inventory radii.** In: Anderson, L.M., ed. Proceedings Southeastern Recreation Research Conference 1984.... pp. 1-7.

"Willingness to travel is important in describing effective outdoor recreation supply.... As a pilot effort to define inventory zones for effective supply of outdoor recreation resources, travel distances as reported in the 1982 National Recreation Survey are summarized by activity and trip length."

3343 Cullen, R., 1985. **Rationing recreation use of public land.** Journal of Environmental Management 21:213-224.

Discussion of six rationing devices used in New Zealand to control and allocate use of public land: Prices, effort requirements, lotteries, queues, permits, and zones.

3344 Ellerbrock, M.J., 1982. **Toward capturing our captive audience.**

University of Florida, Institute of Food and Agricultural Sciences, Food and Resource Economics Dept. Staff Paper no. 217. 24 pp.

"This paper presents some ideas as to why the park and recreation profession has not fully addressed the needs of its clients and offers some considerations for enhancing its effectiveness." (p. 2)

3345 Ewert, A. and Hollenhorst, S., 1985. **Perceptions in the risk recreation experience.** In: Anderson, L.M., ed. Proceedings Southeastern Recreation Research Conference 1984.... pp. 29-37.

"This study sought to ascertain the levels of importance placed on various components of an Outward Bound program offering risk recreation."

3346 Ewert, A., 1985. **Why people climb: The relationship of participant motives and experience level to mountaineering.** Journal of Leisure Research 17:241-250.

3347 Fesenmaier, D.R., 1985. **Modeling variation in destination patronage for outdoor recreation activity.** Journal of Travel Research 24(2):17-23.

"The results indicate that most households repeatedly use a single facility and that there are significant behavioral differences between those who visit a single facility and those who go to a variety of places."

3348 Field, D.R. and Machlis, G.E., 1985. **Thoughts on a new interpretation.** Interpreter 16(4):30-35.

"This paper builds on the premise that humankind must be considered as part of the ecosystem whether we seek to become observers of the human scene or problem-solvers." (p. 31)

3349 Field, D.R. and Wagar, J.A., 1984. **Visitor groups and interpretation in parks and other outdoor leisure settings.** In: Machlis, G.E. and Field, D.R., eds. On interpretation. pp. 11-22.

3350 Field, D.R., Lee, M.E., and Martinson, K., 1985. **Human behavior and recreation habitats: Conceptual issues.** In: Johnson, R.R. et al., tech. coord. Riparian ecosystems and their management. pp. 227-231.

The purpose of this paper "is to describe a conceptual framework which acknowledges the interplay of human culture, social groups, and natural resource systems in defining human behavior at a recreation site." (p. 227)

3351 Godbey, G., 1984. **Some reactions to non-reactive research in park and recreation settings.** In: Peine, J.D., editor. Proceedings of a Workshop on Unobtrusive Techniques to Study Social Behavior in Parks, 1983. pp. 2-5.

3352 Gramann, J.H., Bonnicksen, T.M., Albrecht, D.E., and Kurtz, W.B., 1985. **Recreational access to private forests: The impact of hobby farming and exclusivity.** Journal of Leisure Research 17:234-240.

"This study analyzes public use policies among nonindustrial forestland owners in southern Wisconsin. Landowners' status as 'hobby farmers' increased the liklihood that they would restrict public use."

3353 Hammitt, W.E. and McDonald, C.D., 1983. **Past on-site experience and its relationship to managing river recreation resources.** Forest Science 29:262-266.

"Past on-site experience of river floaters was examined for its relationship to the perception of users toward the management of river recreation resources."

3354 Heywood, J.L., Mullins, G.W., and Christensen, J.E., 1985. **Activity patterns among urban forest recreation participants.** In: Anderson, L.M., ed. Proceedings Southeastern Recreation Research Conference 1984.... pp. 59-66.

Results of a survey in Columbus, Ohio. Implications for urban recreation planning are presented.

3355 International Conference on Winter Recreation, Ottawa, 1981, 1982. **Proceedings.** Ottawa, National Capital Commission. 364 pp.

Includes papers relating to planning. Individual papers are not indexed.

3356 Kaiser, R.A. and Wright, B.A., 1985. **Recreational access to private land: Beyond the liability hurdle.** Journal of Soil and Water Conservation 40:478-481.

Landowner apprehension about liability questions remains a stumbling block to public use of private land for recreational purposes. (p. 478)

3357 Knopf, R.C. and Harvey, M.E., 1985. **A methodology for analyzing relations among higher order concepts in forest recreation models.** Forest Science 31:1018-1034.

"The purpose of this paper is to offer a systematic framework for comprehensively analyzing relations among sets of variables designating different concepts in forest recreation models."

3358 Kuss, F.R. and Morgan, J.M., III, 1984. **Using the USLE to estimate the physical carrying capacity of natural areas for outdoor recreation planning.** Journal of Soil and Water Conservation 39:383-387.

"The method, based on the universal soil loss equation, recognizes the importance of maintaining long-term soil productivity, preventing erosion losses from reaching critical levels in forested environments, and preventing aesthetically

displeasing modifications of the natural character of these environments." (p. 383)

3359 Lucas, R.C. et al., 1984. **Outdoor recreation management.** In: Wenger, K.F., ed. Forestry handbook. pp. 801-885.
Includes sections on trends in outdoor recreation demand, recreation planning, and recreation management.

3360 Machlis, G.E., 1984. **Ethnography as a research tool in understanding park visitors.** In: Peine, J.D., editor. Proceedings of a Workshop on Unobtrusive Techniques to Study Social Behavior in Parks, 1983. pp. 28-38.

3361 Machlis, G.E., 1984. **The social organization of family camping: Implications for interpretation.** In: Machlis, G.E. and Field, D.R., eds. On interpretation. pp. 55-67.
"This paper is concerned with family groups and how they organize themselves while camping." "The objective was to discover patterns of social organization associated with the activity of camping as they might be manifested in each family type."

3362 Manning, R.E., 1985. **Diversity in a democracy: Expanding the recreation opportunity spectrum.** Leisure Sciences 7:377-399.

3363 Mills, A.S., 1985. **Participation motivations for outdoor recreation: A test of Maslow's theory.** Journal of Leisure Research 17:184-199.
A random sample of 708 visitors was interviewed at Tahoe area downhill ski resorts in California and Nevada in 1978.

3364 Molloy, L., 1983. **Wilderness recreation--the New Zealand experience.** In: Molloy, L.F., ed. Wilderness recreation in New Zealand. Wellington, Federated Mountain Clubs of N.Z. (Inc.) pp. 4-19.
Paper presented at FMC 50th Jubilee Conference on Wilderness, Nelson Lakes National Park, 1981.

3365 More, T.A., 1984. **A practical guide to the use of observation in the study of urban parks.** In: Peine, J.D., editor. Proceedings of a Workshop on Unobtrusive Techniques to Study Social Behavior in Parks, 1983. pp. 20-27.

3366 Mullins, G.W., Heywood, J.L., and Maynard, M.K., 1984. **Nonrecreation research--unobtrusive observation.** In: Peine, J.D., editor. Proceedings of a Workshop on Unobtrusive Techniques to Study Social Behavior in Parks, 1983. pp. 39-49.

3367 Murphy, W. and Gardiner, J.J., 1983. **Forest recreation economics.** Irish Forestry 40:12-19.
This paper examines a method for evaluating the benefits of forest recreation. "The method used was the consumer

surplus method using the visitors willingness-to-pay as a means of determining the consumer demand curve."

3368 O'Leary, J.T. et al., 1982. **Examining predictor variables used in outdoor recreation planning.** In: Countryman, D.W. and Sofranko, D.M., editors. Guiding land use dicisions: Planning and management for forests and recreation. pp. 140-149.
Co-authors are: T.L. Napier, F.D. Dottavio, D. Yoesting, and J. Christensen.

3369 Peine, J. and Walker, C., 1984. **Application of unobtrusive research methods in a communications study at Great Smoky Mountains National Park.** In: Peine, J.D., editor. Proceedings of a Workshop on Unobtrusive Techniques to Study Social Behavior in Parks, 1983. pp. 54-55.

3370 Peine, J.D., editor, 1984. **Proceedings of a Workshop on Unobtrusive Techniques to Study Social Behavior in Parks, May, 1983.** U.S. National Park Service, Southeast Regional Office, Natural Science and Research Division. 62 pp.
"Unobtrusive measures refers to those means of evaluating human behavior that do not require direct contact and interaction with the recreator. Examples are direct observation, wear patterns on grounds or equipment, litter patterns, time lapse photography, traffic counters, etc." (p. 1)

3371 Roome, N.J., 1983. **Preferences of national nature reserve users.** Journal of Environmental Management 17:143-152.

3372 Ruddell, E.J. and Hammitt, W.E., 1985. **Motives for visiting a state park: Implications for edge preference and management of edge environments.** In: Anderson, L.M., ed. Proceedings Southeastern Recreation Research Conference 1984.... pp. 67-73.
Visitors to a state park were surveyed "to determine if visitors systematically perceive different edge habitats in the natural environment, and if visitors had different edge preferences."

3373 Rudis, V.A., 1985. **Timber surveys: Potential for dispersed recreation resource assessments.** In: Anderson, L.M., ed. Proceedings Southeastern Recreation Research Conference 1984.... pp. 51-58.
"To assess dispersed recreation resources on Alabama's timberland, field procedures were developed to identify recreation-related forest characteristics during a timber survey conducted between 1980 and 1982." "The user survey indicates the relative use and preference for selected forest characteristics."

3374 Schuster, E.G. and Gibbs, K.C., 1983. **Costs for developed recreation sites in the Northern Region, USDA Forest Service.** U.S. Forest Service, Research Paper INT-317. 6 pp.

"Costs of various categories of campgrounds and picnic grounds, together with boating, swimming and interpretive sites are presented."

3375 Travel and Tourism Research Association, 1983. **Travel research: Its impact on the travel marketing process.** University of Utah, Graduate School of Business, Bureau of Economic and Business Research. 358 pp.

Proceedings of the 14th annual conference of the Travel and Tourism Research Association, Banff, Alberta, June 12-15, 1983.

3376 WanMansor, W.S., 1984. **Forests for outdoor recreation in Malaysia.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:866-872.

3377 Watson, A.E. and Roggenbuck, J.W., 1985. **The use of microcomputers for presenting recreation site information.** In: Anderson, L.M., ed. Proceedings Southeastern Recreation Research Conference 1984.... pp. 9-14.

"Decision criteria of fifty Southern Appalachian backcountry hikers were explored."

3378 Westenburg, L. and Jubenville, A., 1985. **River recreation management research, a decision-making framework applied to the Kenai River.** Agroborealis 17(2):43-48.

3379 Westphal, J.M., 1983. **Campground reservation systems: Are they accomplishing their management goals?** Journal of Environmental Management 17-107-119.

"This paper reviews a study of a reservation system at a state park in Wisconsin and its effect on camper populations."

3380 Agaloos, L.C., 1984. **Management of national parks and other protected areas in the Philippines.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:798-803.

3381 Alvarez, J.B., Jr., 1984. **Management of national parks and other protected areas.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:787-791.

3382 Brotherton, D.I., 1985. **Issues in national park administration.** Environment and Planning A. 17:47-58.
Reviews three major issues involved in the administration of the national parks in England and Wales from the late 1940s to the present.

3383 Dawson, K.J., 1983. **Programming variables for delineating park viewsheds in sensitive areas.** In: Riper, C. van, III et al., eds. Proc. 1st Biennial Conference of Research in California's National Parks, 1982. pp. 263-270.

3384 Ehorn, W.H., 1985. **Politics as it relates to research and resource management in national parks.** Park Science 5(3):9.
Adapted from an address presented at the second Biennial Conference on Research in California's National Parks, Davis, 1984.

3385 Field, D.R., 1983. **Establishing a communication process for applied research.** In: Riper, C. van, III et al., eds. Proc. 1st Biennial Conference of Research in California's National Parks, 1982. pp. 278-283.
"The integration of research into resource management decision making more often depends upon the manner in which the research is undertaken and communicated to park management than the subject area under study."

3386 Foresta, R.A., 1985. **Natural regions for national parks: The Canadian experience.** Applied Geography 5:179-194.
Discussion of the "history and characteristics of the system of natural regions devised by the Canadian federal government as a basis for selecting new national parks ..."

3387 Gladden, J.N., 1984. **Wilderness values and the politics of paradigm shifts: The case of the Boundary Waters Canoe Area.** Ph.D. thesis, Indiana University. Ann Arbor, MI, University Microfilms Int. 352 pp.

3388 Graham, R. and Parkes, W., 1983. **Canadian national park and heritage area research needs and funding sources.** University of Waterloo/Parks Canada Liaison Committee, Occasional Paper no. 1. 160 pp.

3389 Hartono, S., 1984. **Management of national parks and other protected areas in Indonesia.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:792-797.

3390 Henberg, M., 1984. **Wilderness as playground.** Environmental Ethics 6:251-263.
The author concludes that "our public policy ought to favor wilderness activities that most closely imitate the activities of the original geographical explorers." (p. 251)

3391 Hoover, S.L., King, D.A., and Matter, W.J., 1985. **A wilderness riparian environment: Visitor satisfaction, perceptions, reality, and management.** In: Johnson, R.R. et al., tech. coord. Riparian ecosystems and their management. pp. 223-226.
"This study was designed to identify some of the benefits, in terms of satisfaction, that people obtain from recreating in a riparian environment within a designated Wilderness Area... The study was located in the Mount Baldy Wilderness Area (MBWA) in east central Arizona...." (p. 223)

3392 Johnson, D.R. and Field, D.R., 1984. **Social and demographic change: Implications for interpretation.** In: Machlis, G.E. and Field, D.R., eds. On interpretation. pp. 111-125.
"The more that interpreters know about the people they serve, the more effective interpretation will be."

3393 Lopoukhine, N., 1985. **Resource management in national parks.** Forestry Chronicle 61:374-377.
A discussion of national park policy in Canada.

3394 Lucas, P.H.C., 1983. **A New Zealand wilderness preservation system--or a joint wilderness policy?** In: Molloy, L.F., ed. Wilderness recreation in New Zealand. Wellington, Federated Mountain Clubs of N.Z. (Inc.) pp. 46-52.
The author discusses wilderness legislation in New Zealand and the events leading to the passage of the Wilderness Act in the U.S.

3395 Machlis, G.E. and Field, D.R., editors, 1984. **On interpretation: Sociology for interpreters of natural and cultural history.** Corvallis, Oregon State University Press. 176 pp.

3396 Machlis, G.E. and Tichnell, D.L., 1985. **The state of the world's parks: An international assessment for resource management, policy, and research.** Boulder, Colorado, Westview Press. 131 pp.
Discusses threats facing national parks around the world: Poaching, development, pollution, overuse, etc.

3397 Machlis, G.E., 1984. **Interpretation in an urban society.** In: Machlis, G.E. and Field, D.R., eds. On interpretation. pp.

139-149.

"This essay is about nature in the city, how nature is interpreted, and how it can be interpreted for the urban population. An assumption is that interpretive programs in metropolitan areas require a knowledge of historical and contemporary urban trends."

3398 Melnick, R.Z., Sponn, D., and Saxe, E.J., 1984. **Cultural landscapes: Rural historic districts in the National Park System.** U.S. National Park Service, Cultural Resources Management, Park Historic Architecture Division. 80 pp.

"One intention of this publication is to unite the common concerns expressed by various disciplines and apply them in new ways to evaluate rural landscapes within the National Park System."

3399 Nelson, J.G., 1984. **An external perspective on Parks Canada strategies, 1986-2001.** Waterloo, Ontario, University of Waterloo, Parks Canada, Liaison Committee, Occasional Paper no. 2. 62 pp.

"The paper begins with a brief history of national parks.... Following the historical introduction, seventeen major issues are identified."

3400 Nordin, M.B., 1984. **Management of national parks in Penisular Malaysia.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:859-865.

3401 Oldfield, M.L., 1984. **The value of conserving genetic resources.** U.S. National Park Service. 360 pp.

Socioeconomic aspects of genetic resources conservation. Includes a section on tree resources.

3402 Peine, J.D., editor, 1985. **Proceedings of the Conference on the Management of Biosphere Reserves, Gatlinburg, Tennessee,** 1984. Gatlinburg, Tenn., U.S. National Park Service, Great Smoky Mountains National Park Biosphere Reserve, Uplands Field Laboratory. 207 pp.

3403 Proescholdt, K., 1984. **Boundary Waters: More obstacles for a troubled law.** Sierra 69(4): 18-21.

Discussion of problems facing the Boundary Waters Canoe Area Wilderness in Minnesota's Superior National Forest.

3404 Riper, C. van, III, Whittig, L.D., and Murphy, M.L., eds., 1983. **Proceedings of the first Biennial Conference of Research in California's National Parks, University of California, Davis, 1982.** Davis, University of California. 310 pp.

Sponsored by the Cooperative National Parks Resources Studies Unit, the Institute of Ecology, and the Public Service Research and Dissemination Program at the University of California, Davis. Most of the papers deal with physical

sciences, floristic or faunistic studies. Three papers relating to the social sciences have been indexed.

3405 Robertson, D.A. and Wilson, D.S., 1983. **Toward a "natural history" of people in Yosemite National Park.** In: Riper, C. van, III et al., eds. Proc. 1st Biennial Conference of Research in California's National Parks, 1982. pp. 271-277.
The authors studied residents of and visitors to Yosemite National Park "in order to discover their world, how they fit into it, how they interact, what they value...."

3406 Saisorn, B., 1984. **Management of national parks and other protected areas in Thailand.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:804-810.

3407 Scharlin, P., 1984. **Strategies for world conservation: The IUCN redefines its partnership.** Sierra 69(5): 31, 33, 35-36.
The International Union for Conservation of Nature and Natural Resources is composed of 57 governments, 122 government agencies, and 324 scientific and citizens' conservation groups.

3408 Stankey, G.H., 1983. **Wilderness in New Zealand: An outside perspective.** In: Molloy, L.F., ed. Wilderness recreation in New Zealand. Wellington, Federated Mountain Clubs of N.Z. (Inc.) pp. 76-78.
Paper presented at FMC 50th Jubilee Conference on Wilderness, Nelson Lakes National Park, 1981.

3409 Vickery, J.D., 1985. **Bob Marshall: A hunger for wilderness.** Sierra 70(6):58-62.

3410 Washburne, R.F. and Cole, D.N., 1983. **Problems and practices in wilderness management: A survey of managers.** U.S. Forest Service, Research Paper INT-304. 56 pp.
"Presents results of a survey of the managers of units within the National Wilderness Preservation System.... Summarizes use characteristics, management problems, management techniques, nonconforming uses, and other topics."

3411 Williss, G.F., 1985. **"Do things right the first time": The National Park Service and the Alaska National Interest Lands Conservation Act of 1980.** U.S. National Park Service. xi, 322 pp., incl. maps.
An adminstrative and legislative history.

3412 World National Parks Congress, Bali, Indonesia, 1982. **[Abstracts of papers.]** Gland, Switzerland, International Union for Conservation of Nature and Natural Resources. 131 pp.

3413 Burford, R., 1984. **Public rangelands: A look to the future.** In: U.S. BLM. The Taylor Grazing Act, 1934-1984. pp. 57-58.

3414 Child, R.D., 1985. **Planning for integrated resource management in developing countries.** In: White, L.D. and Tiedeman, J.A., eds. Proceedings of the International Rangelands Resources Development Symposium. pp. 157-168.

3415 Dobb, A.J., 1985. **Patterns of range use and social organization: Implications for range development in Lesotho, Southern Africa.** In: White, L.D. and Tiedeman, J.A., eds. Proceedings of the International Rangelands Resources Development Symposium. pp. 134-145.

3416 Fortmann, L. 1985. **Range management at the grassroots: Some hows and whys of local participation.** In: White, L.D. and Tiedeman, J.A., eds. Proceedings of the International Rangelands Resources Development Symposium. pp. 1-10.
"In the end, it is local people who must implement a range project and local people who can destroy it."

3417 Frandsen, O., 1984. **Laws and public land grazing.** In: U.S. BLM. The Taylor Grazing Act, 1934-1984. pp. 11-13.

3418 Greiwe, R.J., 1983. **Strangers on the range: Responding to more people, new values and social changes in the decade ahead.** Rangelands 5:30-32.

3419 Harrington, G.N., Wilson, A.D., and Young, M.D., 1984. **Management of Australia's rangelands.** East Melbourne, Australia, Commonwealth Scientific and Industrial Research Organization, Division of Wildlife and Rangelands Research. 354 pp.

3420 Harris, G.A. et al., 1984. **Range management and ecology.** In: Wenger, K.F., ed. Forestry handbook. pp. 739-800.
Includes a section on administration.

3421 Herndon, P., 1984. **History of grazing on the public lands.** In: U.S. BLM. The Taylor Grazing Act, 1934-1984. pp. 1-6.

3422 Karr, B.L. and Metto, P.K., 1984. **Range management education in Kenya.** Rangelands 6:54-56.

3423 Mathews, W., 1984. **Management of grazing use.** In: U.S. BLM. The Taylor Grazing Act, 1934-1984. pp. 14-16.

3424 Miller, R.K. and Papworth, W.R., 1983. **Can range management objectives be attained within political and judicial systems?** Rangelands 5:9-10.

3425 Moris, J.R., 1985. **Anthropological insights into African range management.** In: White, L.D. and Tiedeman, J.A., eds. Proceedings of the International Rangelands Resources Development Symposium. pp. 78-86.
"This paper outlines the common features in African pastoral adaptation which made 'traditional' livestock production highly flexible and efficient. Major current trends to which producers must adust include warfare, drought, deterioration of services, parallel markets, and land alienation."

3426 Olson, J., 1984. **Managing the rangelands in 1984.** Your Public Lands 34(3):7-9.

3427 Pase, C.P., Pieper, R.D., and Bagoudou, M., 1985. **Range management problems and opportunities in a transhumance pastoral region of Niger.** In: White, L.D. and Tiedeman, J.A., eds. Proceedings of the International Rangelands Resources Development Symposium. pp. 97-105.
The pastoralists of the Niger face many uncertainties, most of which are related to dry season grazing and to recurrent droughts. This paper outlines "some of the constraints to stabilization of the range livestock sector and considers interventions which may help reduce some of the uncertainties."

3428 Rafsnider, G.T., Skold, M.D., and Driscoll, R.S., 1983. **Increases in costs and returns due to intensifying range forage production surveys: An information economic analysis.** Western Journal of Agricultural Economics 8(1):86-95.
This study "estimates increased costs and revenues which can be directly imputed to improving the accuracy of range forage production surveys." (p. 86)

3429 Ross, J.V.H., 1984. **Managing the public rangelands: 50 years since the Taylor Grazing Act.** Rangelands 6:147-151.

3430 Sharp, L., 1984. **Overview of the Taylor Grazing Act.** In: U.S. BLM. The Taylor Grazing Act, 1934-1984. pp. 9-10.

3431 Squires, V.R., 1983. **Australia's foreign assistance programs contributing to rangeland production.** Rangelands 5:205-207.
"Australia's development assistance program is directed towards promoting the economic and social advancement of developing countries, particularly in Asia and the Pacific."

3432 Taha, F.K., 1985. **Sociological aspects and range improvement: The case of Arab countries in the the Middle East.** In: White, L.D. and Tiedeman, J.A., eds. Proceedings of the International Rangelands Resources Development Symposium. pp. 11-23.

"Often many range improvement projects are designed without full consideration of the social, cultural, political, or institutional background of the region at hand."

3433 U.S. Bureau of Land Management, 1984. **The Taylor Grazing Act, 1934-1984: 50 years of progress.** Boise, Idaho, U.S. Bureau of Land Management, Idaho State Office. 124 pp.

3434 U.S. Bur. of Land Management, 1984. **50 years of public land management 1934-1984.** U.S. Bureau of Land Management. 27 pp.
The history of grazing management on the public lands.

3435 Wagstaff, F.J., 1983. **Economic as a tool for natural rangeland managers.** Rangelands 5:121-122.

3436 White, L.D. and Tiedeman, J.A., eds., 1985. **Proceedings of the International Rangelands Resources Development Symposium, Salt Lake City, Feb., 1985.** Washington State University, Cooperative Extension Service, Dept. of Forestry and Range Management. 171 pp.
The theme of the Symposium was: "Human and cultural understanding--key to improving benefits from rangelands."

3437 Young, M.D., Wilson, A.D., and Harrington, G.N., 1984. **Management aims, objectives and responsibilities.** In: Harrington, G.N. et al. Management of Australia's rangelands. pp. 15-22.

3438 Young, M.D., 1984. **Rangeland administration.** In: Harrington, G.N. et al. Management of Australia's rangelands. pp. 157-170.

3439 Young, M.D., Gibbs, M., Holmes, W.E., and Mills, D.M.D., 1984. **Socio-economic influences on pastoral management.** In: Harrington, G.N. et al. Management of Australia's rangelands. pp. 79-93.

3440 Allen, P.G., Stevens, T.H., and More, T.A., 1985. **Measuring the economic value of urban parks: A caution.** Leisure Sciences 7:467-477.

3441 Black, S., Broadhurst, P., Hightower, J., and Schauman, S., 1985. **The value of riparian habitat and wildlife to the residents of a rapidly urbanizing community.** In: Johnson, R.R., et al., tech. coord. Riparian ecosystems and their management. pp. 413-416.

"This paper is a result of investigations into public attitudes toward wildlife habitat in Bellevue, Washington...."

3442 Carlson, C., 1985. **Urban forestry advancements in North Dakota, USA.** Arboricultural Journal 9:303-307.

3443 Cordell, H.K. et al., 1984. **Urban forestry.** In: Wenger, K.F., ed. Forestry handbook. pp 887-983.

Includes sections on planning, administration and management, and on valuing urban trees.

3444 Coughlin, R.E., Mendes, D.C., and Strong, A.L., 1984. **Private trees and public interest: Programs for protecting and planting trees in metropolitan areas.** University of Pennsylvania, Dept. of City and Regional Planning, Research Report Series no. 10. 113 pp.

"The purpose of this study is to identify programs to protect privately-owned trees for environmental and aesthetic reasons, to analyze their statutory provisions, to examine the experience that communities have had with such programs, and to make recommendations on how such programs could be made more effective."

3445 Kelly, T., 1985. **Strategic riparian resource management in a metropolitan setting: The Minnesota Valley experience.** In: Johnson, R.R. et al., tech. coord. Riparian ecosystems and their management. pp. 403-407.

"Riparian lands in metropolitan areas are often under extreme pressure to accomodate conflicting uses. Strategic management planning provides a method for mediating conflicts and developing realistic objectives."

3446 McCullen, J. and Webb, R., 1982. **A manual on urban trees.** Dublin, An Foras Forbartha. 139 pp.

Includes sections on: "The functions and values of tress," "Trees and the law," and "Urban tree management."

3447 Stiegler, J.E., 1985. **Public perception of the urban forest.** University of Minnesota, College of Forestry, Plan B Paper (for M.S. degree), 41 pp. + appendix.

"This study investigates the perception of the urban

forest by selected residents (students and senior citizens) of the City of Robbinsdale, Minnesota."

3448 Weicherding, P.J., 1984. **Socio-psychological determinants of attitudes toward natural resources.** University of Minnesota, College of Forestry, Ph.D. thesis. 232 pp.

The purpose of this study was to examine some of the causes for the "changes in the natural resource attitudes of the 'urbanized' public"...and "based on this information, suggest practical changes in natural resource management policy."

3449 King, P.N., Hamilton, L.S., Williams, J., and Pearsall, S., III, 1984. **A source book for watershed managers.** Honolulu, Hawaii, East-West Center. 176 pp.
A bibliography of over 1300 references, predominantly from English language sources: Includes a section on land use or management practice.

3450 Vergara, N.T., 1985. **The potential role of agroforestry in integrated watershed management.** Paper presented at USAID/EWC Workshop in Integrated Watershed Management, Honolulu, Hawaii, Jan. 7-11, 1985. 31 pp.

3451 Weaver, W.E., Seltenrich, M.S., Sonnevil, R.A., and Babcock, E.M., 1982. **The use of cost-effectiveness as a technique to evaluate and improve watershed rehabilitation for erosion control, Redwood National park.** In: Watershed Rehabilitation in Redwood National Park and other Pacific Coastal Areas: Proceedings of a Symposium, Aug., 1981. Berkeley, John Muir Institute, Center for Natural Resource Studies; U.S. National Park Service. pp. 341-360.

3452 Anderson, R.S. and Leitch, J.A., 1984. **Characteristics and expenditures of nonresident sportsmen in North Dakota in 1983.** North Dakota State University, Department of Agricultural Economics, Agricultural Economics Misc. Report no. 77. 69 pp.

3453 Bromley, M., 1985. **Wildlife management implications of petroleum exploration and development in wildland environments.** U.S. Forest Service, Gen. Tech. Rep. INT-191. 42 pp.

Includes a section on strategies for minimizing and mitigating adverse effects. A literature review with 18 page annotated bibliography.

3454 Butler, J.R., 1984. **The myths, the reality and the challenges of managing for the non-consumptive wildlife user.** In: McComb, W.C., ed. Proceedings of the Workshop on Management of Nongame Species and Ecological Communities. pp. 127-135.

"This paper reviews, from the Canadian perspective, what researchers and managers are learning about how the public relates to the wildlife resource and discusses what this means for fish and wildlife agencies."

3455 Dickson, J.G., McIlwain, J.P., and Stormer, F.A., 1984. **Nongame wildlife management and research in the U.S. Forest Service.** In: McComb, W.C., ed. Proceedings of the Workshop on Management of Nongame Species and Ecological Communities. pp. 6-13.

"The purpose of this paper is to provide a brief history and overview of how the Forest Service is meeting its responsibilities and mandates for nongame wildlife management and research."

3456 Galli, J., 1984. **Planning for the management of nongame wildlife in Minnesota.** In: McComb, W.C., ed. Proceedings of the Workshop on Managment of Nongame Species and Ecological Communities. pp. 69-74.

"This paper discusses the conceptual and philosophical framework guiding the planning effort."

3457 Halls, L.K. et al., 1984. **Forest wildlife and fish management.** In: Wenger, K.F., ed. Forestry handbook. pp. 679-737.

3458 Hartono, S., 1984. **Management of wildlife resources and reserves in Indonesia.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:880-885.

3459 Kerestes, D.E. and Leitch, J.A., 1983. **An analysis of sportsman activity data collection methods for North Dakota.** North Dakota State University, Agricultural Experiment Station, Department of Agricultural Economics, Agricultural Economics

Report no. 180. 67 pp.
"A two-year research project was initiated to design efficient and compatible methods to collect harvest, expenditure, and socioeconomic data from North Dakota's licensed sportsmen."

3460 Lassiter, R.L., Jr., 1985. **Access to and management of the wildlife resources on large private timberland holdings in the southeastern United States.** Cookeville, Tenn., Tennessee Tech University, College of Business Administration, Monograph Series no. 1. 253 pp.
This report deals with access to and management of wildlife located on large private forestland holdings in Alabama, Florida, Georgia, and Tennessee.

3461 Lechoncito, J.L., 1984. **Status and implications of managing the wildlife resources and reserves in the Philippines.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:892-899.

3462 McComb. W.C., ed., 1984. **Proceedings of the Workshop on Management of Nongame Species and Ecological Communities, Lexington, KY, 1984.** University of Kentucky, Department of Forestry. 404 pp.
Selected papers are indexed in this section.

3463 McConnell, C.A., 1984. **National status of nongame wildlife programs.** In: McComb, W.C., ed. Proceedings of the Workshop on Management of Nongame Species and Ecological Communities. pp. 1-5.
"The status of nongame programs of government agencies, private organizations and educational institutions is summarized."

3464 Nordin, M.B., 1984. **Management of wildlife reserves in Peninsular Malaysia.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:903-912.

3465 Richards, M.T. and Wood, D.B., 1985. **The economic value of sportfishing at Lees Ferry, Arizona.** In: Johnson, R.R. et al., tech. coord. Riparian ecosystems and their management. pp. 219-222.
"Economic values were estimated for trophy and non-trophy anglers at Lees Ferry, Arizona. Management recommendations are made, based on these values...."

3466 Samsudin, A.R.B., 1984. **Management of wildlife resources in Peninsular Malaysia.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:886-891.

3467 Schwinden, C.J. and Leitch, J.A., 1984. **Regional socioeconomic impact of the Devils Lake fishery.** North Dakota State

University, Agricultural Experiment Station, Department of Agricultural Economics, Agricultural Economics Report no. 191. 24 pp.

"A personal interview survey of anglers who fished Devils Lake during the 1983-84 season was conducted to obtain data on selected socioeconomic variables and fishing expenditures which were used to estimate the direct and secondary impacts on the Devils Lake local economy."

3468 Short, H.L., 1985. **Management goals and habitat structure.** In: Johnson, R.R. et al., tech. coord. Riparian ecosystems and their management. pp. 257-262.

3469 Suvanakorn, P., 1984. **Management of wildlife resources and reserves in Thailand.** In: ASEAN Forestry Congress, 1st, Manila, 1983. Proceedings 3:900-902.

3470 Thomas, A., 1984. **Wildlife habitat management.** In: U.S. BLM. The Taylor Grazing Act, 1934-1984. pp. 44-46.

3471 Adams, W.S., 1985. **Total tree chipping and its effects on site preparation efforts and costs.** American Pulpwood Association, Technical Paper 85-P-3. 2 pp.

The author states that "the whole tree chipper is the best mechanical site preparation tool available." The chipper allows regeneration of a site at minimal costs.

3472 American Pulpwood Association Inc., 1985. **1985 wood fiber forecast for South.** Jackson, MS, American Pulpwood Association Inc., 85-A-4. 12 pp.

Includes tables of southern wood fiber requirements and consumption, and method of delivery.

3473 Blyth, J.E. and Smith, W.B., 1985. **Pulpwood production in the Lake States by county, 1984.** U.S. Forest Service, Research Note NC-334. 4pp.

Pulpwood production is shown by county and species group in Michigan, Minnesota, and Wisconsin.

3474 Blyth, J.E. and Smith, W.B., 1985. **Pulpwood production in the North-Central Region by county, 1983.** U.S. Forest Service, Resource Bulletin NC-85. 25 pp.

Shows Michigan, Minnesota, and Wisconsin production by species for each county. Presents production and receipt data for Illinois, Indiana, Iowa, and Missouri.

3475 Boyd, C., 1985. **Forestry productivity limits: Real, imagined and potential.** University of Alberta, Forest Industry Lecture Series no. 14. 16 pp.

The issues explored in this paper are: (1) "What are the current or potential limits to forest productivity?" and (2) "How productive are Alberta's competitor geographies, specifically the Douglas-fir region and the southern pine region.?"

3476 Cascade Holistic Economic Consultants, 1985. **The citizens' guide to timber management in the national forests.** Forest Planning 6(7):1-39.

A special issue with articles on harvest scheduling, the economics of timber management, timber sales, forest plans, etc.

3477 Chang, S.J., 1983. **Rotation age, management intensity, and the economic factors of timber production: Do changes in stumpage price, interest rate, regeneration cost, and forest taxation matter?** Forest Science 29:267-277.

This paper presents an "analysis of the impact of changes in timber price and cost of production factors on the optimal age and planting density."

3478 Dippon, D.R. and Shelton, J.T., 1983. **Rate of return from**

**fertilization of semimature slash pine plantations.** In: Proceedings of the Second Biennial Southern Silvicultural Research Conference, Atlanta, 1982. U.S. Forest Service, Gen. Tech. Rep. SE-24:302-311.

3479 Ditlevsen, B., 1985. **Economic considerations in forest tree breeding programmes.** In: Forest tree improvement. FAO Forestry Paper 20:187-195.
This paper deals with "considerations relating to financial cost-benefit models...."

3480 Dolan, A.G. and Russell, B.P., 1985. **Economic survey of private forestry: England and Wales establishment costs. Thirty-second annual report for the forest year 1983.** University of Oxford, Commonwealth Forestry Institute, Department of Forestry, Economics Section. 36 pp.

3481 Fight, R.D., 1983. **What good are efficient timber prescriptions?** In: U.S. Forest Service. Proceedings of the National Silviculture Workshop, 1983. pp. 129-133.
"An efficient timber prescription is one that maximizes the values of the land for timber production."

3482 Francis, P.J., 1984. **Mechanical and chemical brush control: Their effectiveness and costs in spruce plantations.** University of New Brunswick. 46 pp.
A report submitted in partial fulfillment of the requirements for the B.S. degree in Forest Engineering, University of New Brunswick. The effect each cleaning method had on the competition and the initial cost of each method are examined and compared.

3483 Guldin, R.W., 1983. **Analyzing bids for silvicultural contracts promotes efficient allocation of funds.** In: U.S. Forest Service. Proceedings of the National Silviculture Workshop, 1983. pp. 175-189.

3484 Guldin, R.W., 1983. **Handplanting costs are influenced by planting site characteristics.** In: Proceedings of the Second Biennial Southern Silvicultural Research Conference, Atlanta, 1982. U.S. Forest Service, Gen. Tech. Rep. SE-24:30-33.
"There is a strong negative association between handplanting cost and intensity of site preparation." (p. 33)

3485 Hazard, J.W. and Pickford, S.G., 1984. **Cost functions for the line intersect method of sampling forest residue in the Pacific Northwest.** Canadian Journal of Forest Research 14:57-62.

3486 Johansson, P.-O., 1984. **Disequilibrium cutting rules.** Sveriges Lantbruksuniversitet, Institutionen for Skogsekonomi, Rapport 47. 19 pp.

"This paper derives cost-benefit rules to be used when examining whether unemployment and other market imbalances provide justification for national forest managers to depart from the classical Faustman rotation rule."

3487 Lofgren, K.G., 1984. **The effect on the socially optimal rotation period in forestry of biotechnological improvements of the growth function.** Sveriges Lantbruksuniversitet, Institutionen for Skogsekonomi, Rapport 50. 23 pp.

"The purpose of this paper is to analyse, at the stand level, how genetical or simply biotechnological progress affects the socially optimal rotation period, and the value of forest land. The question has relevance for forest policy...."

3488 McLain, W.H. and Booth, G.D., 1985. **Colorado's 1982 fuelwood harvest.** U.S. Forest Service, Resource Bulletin INT-36. 11 pp.

3489 Mills, T.J., 1983. **Causes of variation in the direct cost of silvicultural treatments on national forest land.** In: U.S. Forest Service. Proceedings of the National Silviculture Workshop, 1983. pp. 217-232.

3490 Nautiyal, J.C. and Innes, M.R., 1984. **Optimal economic rotation for a mixed species even-aged forest.** Canadian Journal of Agricultural Economics 32:526-538.

The authors conclude "that at high discount rates faster growing components of a mixture should be given more importance in deciding the common optimal rotation. At low discount rates the slower growing components need to be emphasized." (p. 526)

3491 Newman, D.H., Gilbert, C.B., and Hyde, W.F., 1985. **The optimal forest rotation with evolving prices.** Land Economics 61:347-353.

3492 Packee, E.C., 1985. **Predicting the growth and yield of interior Alaska forests.** Agroborealis 17(2):49-57.

3493 Rashford, J.H., 1985. **Social impediments to the cultivation of trees in Jamaica.** Caribbean Food Crops Society. Proceedings. 20:249-250.

"This paper seeks to show the importance of trees to Jamaicans and to indicate the social reasons why small farmers choose not to plant them and to destroy wild seedlings that spring up in their fields." (p. 249)

3494 Reisinger, T.W., 1985. **A simulation-based approach to evaluating commercial thinning decisions in loblolly pine plantations.** Southern Journal of Applied Foresty 9:211-216.

3495 Rixon, A. and Cernold, A., 1983. **Stamkvistning en lonsam skogsvardsatgard?** Sveriges Lantbruksuniversitet,

Institutionen for Virkeslara, Rapport nr. 145. 43 pp. + tables.
In Swedish, with English summary: "Pruning young pines--a profitable investment?" The authors give some "biological and technical prerequisites for pruning young pines...A method for estimating the profitability of pruning is also given."

3496 Skinner, M., 1983. **A practical application of economic analysis to vegetation management treatments.** In: U.S. Forest Service. Proceedings of the National Silviculture Workshop, 1983. pp. 196-208.

3497 Thomas, T.H. and McLean, S.C.T., 1984. **Farmers' attitudes to forestry.** Welsh Studies in Agricultural Economics 3:45-58.
"This paper accepts that the programme for the expansion of the forest area in the UK will continue, integrated or otherwise, and explores the nature of farmers' attitudes to forestry in this context." (p. 45)

3498 Traczewitz, O.G., 1982. **Federal timber production and resource planning for corporate material needs.** In: Hewett, C.E. et al., eds. Forests in demand. pp. 35-41.

3499 U.S. Forest Service, Timber Management Staff, Silviculture Group, 1983. **Proceedings of the National Silviculture Workshop, Eugene, Oregon, May 16-20, 1983.** U.S. Forest Service, Timber Management. 246 pp.
The theme of the workshop was "Economics of Silvicultural Investments." Selected articles are indexed.

3500 Wichert, D., 1985. **Developing Wisconsin's wood fuel potential.** Wisconsin Division of State Energy. 41 pp.
Economic aspects are discussed.

3501 Widmann, R.H., Brooks, R.T., Jr., Rowland, E.B., and Shassere, S.N., 1983. **Pulpwood harvest intensity in the Northeast--1981.** Tennessee Valley Authority, Division of Land and Forest Resources, Technical Note B51. 19 pp.
"Graphics illustrating 1981 data for pulpwood production and intensity are shown by county for 14 northeastern states. A brief explanation of the graphics is included."

3502 Widmann, R.H., 1983. **Pulpwood production in the Northeast--1982.** U.S. Forest Service, Resource Bulletin NE-79. 22pp.

3503 Willan, R.L., 1985. **Tree improvement in relation to national forest policy and forest management.** In: Forest tree improvement. FAO Forestry Paper 20:11-14.
"The justification of any national programme of tree improvement and the amount of resources devoted to it should be largely determined by the forest policy of the country."

3504 Winebar, B.L. and Gunter, J.E., 1985. **Costs of forest management practices in the Lake States--including a comparison of costs between the major types of forestry organizations.** In: Managing red pine: Proceedings, Society of American Foresters, Region 5 Technical Conference, 2d, Marquette, Mich., 1984. pp. 43-70.

The types of organizations surveyed were: Forest products companies, contractors/vendors, consultants, state agencies, and federal agencies.

3505 Baumgras, J.E. and Peters, P.E., 1985. **Cost and production analysis of the Bitterroot Miniyarder on an Appalachian hardwood site.** U.S. Forest Service, Research Paper NE-557. 13 pp.

"Cost analysis shows that yarding costs will range from $18.00 to $36.00 per cunit, depending upon crew efficiency and yarding conditions." (p. 13)

3506 Benson, R.E. and Niccolucci, M.J., 1985. **Costs of managing nontimber resources when harvesting timber in the Northern Rockies.** U.S. Forest Service, Research Paper INT-351. 22 pp.

"Some 187 Forest Service timber sales in western Montana and northern Idaho were analyzed to determine the costs of protecting or enhancing nontimber resources during timber harvesting."

3507 Benson, R.E., McCool, S.F., and Schlieter, J.A., 1985. **Attaining visual quality objectives in timber harvest areas--landscape architects' evaluation.** U.S. Forest Service, Research Paper INT-348. 7 pp.

"Three groups of Forest Service landscape architects rated color slides of 25 timber-harvested areas for attainment of visual quality objectives and for scenic beauty."

3508 FAO, 1985. **Logging and transportation in steep terrain.** Rome, Food and Agriculture Organization of the United Nations. FAO Forestry Paper no. 14, rev. 1. 333 pp.

Report of the Fourth FAO/Austria Training Course on Mountain Forest Roads and Harvesting, Ossiach and Ort, Austria, 30 May-26 June, 1983. Includes sections on forest road planning and construction, logging, and ergonomics and safety.

3509 Folkema, M.P. and Holowacz, J., 1985. **Mechanized logging in the Soviet Union--1984.** Forest Engineering Research Institute of Canada, Special Report no. SR-29. 9 pp.

Paper presented at 66th annual meeting, Woodlands Section, Canadian Pulp and Paper Association. Also published in Canadian Forest Industries, Sept. 1985. The authors conclude that "the trend to increased logging mechanization in the USSR is likely to continue in spite of the fact that costs are often higher than for manual systems."

3510 Haight, R.G., 1985. **A comparison of dynamic and static economic models of uneven-aged stand management.** Forest Science 31:957-974.

"Numerical techniques have been used to compute the discrete-time sequence of residual diameter distributions that maximize the present net worth (PNW) of harvestable volume from an uneven-aged stand."

3511 Irland, L.C., 1985. **Logging and water quality: State regulation in New England.** Journal of Soil and Water Conservation 40:98-102.

Accelerated timber harvesting during the last decade has generated public concern about the aesthetic impacts of logging and occasional incidents of stream sedimentation... New England states meanwhile have been developing regulatory strategies for controlling sedimentation relating to timber harvesting.

3512 Jobstl, H., 1985. **Cost calculations in logging.** In: FAO. Logging and transport in steep terrain. FAO Forestry Paper no. 14, rev. 1. pp. 241-260.

3513 Lohmander, P., 1985. **Continuous extraction under risk.** Sveriges Lantbruksuniversitet, Institutionen for Skogsekonomi, Arbettsrapport 46. 41 pp.

3514 Meridian Corporation, 1984. **Energy wood harvesting technology: A review of the state of the art.** Prepared for U.S. Dept. of Energy. DOE/CE/30784-1. 108 pp.

The report deals not only with the development of appropriate harvesting technology, but also with economic considerations such as harvesting costs and the comparative value of wood energy to other energy sources.

3515 Mills, W.L., Jr. and Tufts, R.A., 1983. **Financial analysis of equipment: A general approach to selection, replacement, and machine cost problems.** In: Proceedings of the Second Biennial Southern Silvicultural Research Conference, Atlanta, 1982. U.S. Forest Service, Gen. Tech. Rep. SE-24:253-259.

This paper emphasizes using financial analysis information in selection and replacement decisions.

3516 Trzesniowski, A., 1985. **Tree felling in mountainous coniferous forests, techniques, production and costs.** In: FAO. Logging and transport in steep terrain. FAO Forestry Paper no. 14, rev. 1. pp. 175-197.

3517 Twaddle, A., 1985. **Large scale log merchandising--an option for NZ logging?** Forest Industries (NZ) 16(11):29, 31, 34.

Large scale log merchandising involves the gathering of logs from several harvesting sites together at one location for converting into log products. The author states that log merchandising "appears to offer a lot of promise."

3518 Barron, D., 1985. **Is Canada's forest industry really running out of timber?** Pulp & Paper Canada 86(10):18-19.

3519 Bradley, D.P. and Hoganson, H.M., 1985. **Wood for energy: A Minnesota case study.** Southern Lumberman 246(3064):48-50.
The authors conclude that "northeastern Minnesota's forest resource could supply significantly more wood to an energy market without greatly increasing the cost of other forest products." (p. 50)

3520 Brannlund, R., Johansson, P.O., and Lofgren, K.G., 1983. **An econometric analysis of timber supply in Sweden.** Sveriges Lantbruksuniversitet, Institutionen for Skogseknonomi, Rapport 44. 24 pp. + app.

3521 Bruce, I.A., 1983. **National wood supply projections: The possibilities for increased precision through a regional approach.** Australian Forestry 46:25-34.
"The aim of this paper is to specify desirable improvements in the methodology used in making wood supply projections for Australia with particular reference to log supply." (p. 25)

3522 Hackett, R.L., 1984. **Timber volume in Nebraska, 1983.** U.S. Forest Service, Research Note NC-326. 6 pp.
"Presents statistics on Nebraska's growing-stock and sawtimber volumes by county for 1983."

3523 Hofstad, O., 1984. **Simulation model for the analysis of optimal timberstock throughout the year.** Norsk Institutt for Skogforskning, Medd. 38(15):1-21.
Describes a simulation model developed "for the timberstock at industry and at roadside in the forest." "The model is used to analyse optimal stocklevels considering storage costs and the risk of stockout." (p. 17)

3524 Honer, T.G. and Bickerstaff, A., 1985. **Canada's forest area and wood volume balance 1977-1981: An appraisal of change under present levels of management.** Pacific Forestry Centre, Information Report BC-X-272. 84 pp.
The author concludes that "Canadian forests still contain a physical supply of mature and overmature timber available for harvest...but...to maintain the base, substantial investments in expanded forest renewal programs are required." (p. 4)

3525 Johansson, P.O. and Lofgren, K.G., 1983. **The timber supply function under regulatory constraints.** Sveriges Lantbruksuniversitet, Institutionen for Skogsekonomi, Rapport 40. 23 pp.

"In this paper the properties of the supply function of a present value maximizing forest farmer are analyzed."

3526 Johansson, P.O. and Lofgren, K.G., 1983. **The timber supply function under regulatory constraints.** Canadian Journal of Forest Research 13:979-985.

"In this paper the properties of the supply function of a present value maximizing forest farmer are analyzed." In particular, the authors "consider how its properties are changed by the presence of binding constraints on cutting behaviour." (p. 979)

3527 Keegan, C.E., III, and Jackson, T.P., 1985. **Mill residue availability in the Inland Empire.** Forest Products Journal 35(10):56-61.

The authors "analyze the mill residue supply situation in the major timber producing regions of Idaho, Montana, and eastern Washington." (p. 56)

3528 Kibblewhite, R.P. and Levack, H.H., 1984. **The radiata pine resource--its qualities and quantities.** In: Kininmonth, J.A. and Young, G.D., Comp. Forest products research needs for new-crop radiata pine. pp. 3-10.

This paper is a review of the qualities and quantities of New Zealand's radiata pine resource.

3529 Lofgren, K.G., 1983. **Endowments and timber supply.** Sveriges Lantbruksuniversitet, Institutionen for Skogseknonomi, Rapport 45. 16 pp.

"This paper contains an investigation of how changes in the size and composition of the initial endowments of forest land affect timber supply and the present value function."

3530 Lyon, K.S., and Sedjo, R.A., 1983. **An optimal control theory model to estimate the regional long-term supply of timber.** Forest Science 29:798-812.

"This paper develops and applies a Supply Potential Optimal Control (SPOC) model which examines the potential long-term supply of timber harvests."

3531 National Forest Products Association, 1985. **Long-term timber supply: The South's dilemma.** Southern Lumberman 246(3064):30-31.

Discusses a U.S. Forest Service study to be completed in 1986. The study is "likely to project a significant change in the supply/demand relationship for timber" and "may well conclude that current trends portend higher timber costs as a result of less supply." (p. 31)

3532 Peterson, R.M., 1985. **Growing a fourth forest: Timber's future in the South.** Southern Lumberman 246(3064):66-67.

3533 Reed, F.L.C., 1985. **Timber, timber, timber...** In: Pacific Rim Markets for Forest Products 1985-2000. Conference proceedings. pp.35-45.
Based largely on a report titled "A Synopsis of World Softwood Timber Supplies."

3534 Sedjo, R.A., 1985. **Outlook for the world and the U.S. timber supply.** Paper presented to Conference on "Assessing Timberland Investment Opportunities," Atlanta, Georgia, Sept., 1985. 12 pp. + map.

3535 Sedjo, R.A., 1985. **World timber resource overview.** Paper presented to workshop, "Exporting Forest Products", Mobile, Alabama, Sept., 1985. 10 pp.
Discusses global supply of industrial wood and potential sources of increased future supply. The author concludes: "In the long term, the U.S. wood products should be much more competitive internationally than they are today."

3536 Slocum, R.W., Jr., 1985. **Nonindustrial private forest landowners: Timber supply role.** In: Ellefson, P.V. et al., eds. Forest industry as a force in economic development: Options for Minnesota's future. pp. 34-35.
NIPF lands are a major source of wood fiber in Minnesota.

3537 Smrekar, T.J., 1985. **Timber as a critical industrial resource: Business expectations.** In: Ellefson, P.V. et al., eds. Forestry industry as a force in economic development: Options for Minnesota's future. pp. 28-30.

3538 Spencer, J.S., Jr. and Hahn, J.T., 1984. **Michigan's fourth forest inventory: Timber volumes and projections of timber supply.** U.S. Forest Service, Resource Bulletin NC-72. 95 pp.
Presents statistics from the fourth timber resource inventory of Michigan.

3539 Stone, R.N., 1985. **Timber supply information: Meeting industrial needs.** In: Ellefson, P.V. et al., eds. Forest industry as a force in economic development: Options for Minnesota's future. pp. 18-20.

3540 Sutton, W.J., 1985. **Southern Pacific Rim timber supply.** In: Pacific Rim Markets for Forest Products 1985-2000. Conference proceedings. pp. 16-34.
This paper deals with timber supply from Australia, New Zealand, and Chile.

3541 Tasmania Forestry Commission, 1984. **Report of the assessment of the private forest resource 1984.** Tasmania Forestry Commission. 20 pp.

3542 Viles, D.G.K., 1984. **Assurance of future supplies of round**

**produce.** In: Kininmonth, J.A. and Young, G.D., comp. Forest products research needs for new-crop radiata pine. pp. 81-94.

A discussion of the future supplies of roundwood, i.e., posts, poles, and piles, in New Zealand.

3543 Back, D., 1983. **Factors affecting market value of timber.** Auburn University, Alabama Cooperative Extension Service. 2 pp.

3544 Baumback, R. et al., 1983. **National study report, Small Business Timber Sale Set-Aside Program.** Joint study by U.S. Forest Service and U.S. Small Business Administration. 214 pp.
"This review of the ...Set-Aside Program was conducted to identify areas where the program needs strengthening.... Establishment of the Set-Aside Program was necessary to ensure that small business received a fair proportion of Forest Service timber sales." (p. v)

3545 Clawson, M., 1985. **Did national forest stumpage sales accelerate inflation?** Journal of Forestry 83:748-754.
The author argues that "inflation fueled speculation" on federal stumpage during the 1970s and early 1980s stimulated general inflation.

3546 Frazer, E.C., III, 1984. **How to bid out a timber sale.** Forest Farmer 43(10):10-11.

3547 Ozier, T.S., 1984. **Preparing the timber sale contract.** Forest Farmer 43(10):6-7.

3548 Schreuder, H.T., 1984. **Poisson sampling and some alternatives in timber sales sampling.** Forest Ecology and Management 8:149-160.
Sampling schemes were studied for timber sales where every tree to be sold must be marked. Alternatives to Poisson sampling were recommended.

3549 Straka, T.J. and Watson, W.F., 1985. **Avoiding ambiguities in timber sale agreements.** Consultant 30(2):29-31.

3550 U.S. Congress, 1984. **Federal Timber Contract Payment Modification Act.** U.S. Congress, 98th, Public Law 98-478. 5pp.

3551 U.S. Congress, 1984. **Federal Timber Contract Payment Modification Act.** Hearing before the Subcommittee on Forests, Family Farms, and Energy of the Committee on Agriculture, House of Representatives, 98th Congress, 2nd Session on H.R. 5649. 128 pp.

3552 Barnes, C.S. and Sinclair, S.A., 1985. **Forward integration in the building products market and its impact on the financial performances of selected forest products firms.** Forest Products Journal 35(11/12):68-74.
"Marketing channels used by the building products divisions of 11 forest products firms were studied. Divisions were categorized on the basis of their distribution structure, specifically, their degre of forward integration toward the retail market."

3553 Blyth, J.E., Tibben, J., and Smith, W.B., 1984. **Primary forest products industry and timber use, Iowa, 1980.** U.S. Forest Service, Resource Bulletin NC-82. 21 pp.
A discussion of recent Iowa forest industry trends.

3554 Blyth, J.E., Jones, S., and Smith, W.B., 1983. **Primary forest products industry and timber use, Missouri, 1980.** U.S. Forest Service, Resource Bulletin NC-71. 22 pp.
Discusses recent Missouri forest industry trends.

3555 Corson, S.R., 1984. **Industrial potential and constraints.** In: Kininmonth, J.A. and Young, G.D., comp. Forest products research needs for new-crop radiata pine. pp. 11-20.
The author predicts that New Zealand has the potential to become one of the world's major suppliers of wood and fibre products.

3556 Ellefson, P.V., 1985. **Economic structure of the eastern hardwood industry: Past and future trends.** Paper presented at FPRS Conference on Eastern Hardwoods: The Resource, the Industry and the Markets. Harrisburg, PA, Sept. 9-11, 1985. 5 pp. + figures & tables.

3557 Ellefson, P.V., Lewis, B.J., and Skok, R.A., editors, 1985. **Forest industry as a force in economic development: Options for Minnesota's future.** Minnesota Agricultural Experiment Station, Miscellaneous Publication no. 33. 60 pp.
Proceedings of the Governor's Conference on Forestry, St. Paul, MN, Sept., 1984.

3558 Finnish Austrian Workshop on Energy from Wood, Vienna, 1983. **Proceedings.** Vienna, Bundesministerium fur Wissenschaft und Forschung. 298 pp.
Includes 23 papers, one in German, the others in English. Among the topics covered are: "The role of wood in energy economy" and "Economics and market introduction."

3559 Fukasaku, K., 1983. **Wood processing industry in a "timber deficit" country, Japan: Structural change, adjustment problems and policies.** United Nations Industrial Development

Organization, Division for Industrial Studies, Regional and Country Studies Branch, UNIDO/IS.403. 81 pp.

3560 Greaves, H., 1984. **Wood preservation in Australia.** Stockholm, Styrelsen for Teknisk Utveckling, STU Information no. 438. 63 pp.
Includes section on the forest products industry and on the wood preservation industry in Australia.

3561 Hansen, B.G. and Araman, P.A., 1985. **Low-cost opportunity for small-scale manufacture of hardwood blanks.** U.S. Forest Service, Research Paper NE-559. 6 pp.
"Discusses the economics associated with the small-scale manufacture of blanks from four species--red oak, black cherry, hard maple, and yellow-poplar."

3562 Haygreen, J.G., 1985. **New forest products and markets: Forces defining the future.** In: Ellefson, P.V. et al., eds. Forest industry as a force in economic development: Options for Minnesota's future. pp. 16-18.
The author discusses four areas related to the importance of new technology in developing Minnesota's forest products industry.

3563 Haynes, W.N., 1985. **The forest products industry--a long-range outlook.** Forest Products Journal 35(10):18-20.

3564 Ince, P.J., 1983. **Economics of investment in press drying for kraft linerboard.** In: Press Dry Conference 1983. U.S. Forest Products Laboratory. 5 pp.

3565 Ince, P.J., 1983. **Process economics of press drying for kraft linerboard.** In: Press Dry Conference 1983. U.S. Forest Products Laboratory. 6 pp.

3566 Katila, M., 1983. **Teknisen kehityksen luonne ja tuotannon kasvu suomen massa--ja paperiteollisuudessa 1954-1980.** Helsingin Yliopiston Kansantaloudellisen Metsaekonomian Laitos, Tiedonantoja no. 4. 64 pp. + tables.
In Finnish with English summary. English title: "Bias of technical change and growth of output in the Finnish pulp and paper industry, 1954-1980." "Technical change was found to exhibit a labour-saving bias that resulted in a threefold increase in labor's productive efficiency while capital's efficiency declined." (p. 63)

3567 Kim, S.B., Youm, Y.C., Park, M.K., and Lee, Y.D., 1985. **A study on productivity analysis of plywood industries and lumber industries in Korea.** Seoul, Korea, Forest Research Institute, Research Reports 32:135-145.

3568 Kininmonth, J.A. and Young, G.D., compilers, 1984. **Forest products research needs for new-crop radiata pine:** Proceedings

of the 1982 New Zealand Forest Products Research Conference, Rotorua 9-11 November 1982. New Zealand Forest Service, Forest Research Institute, F.R.I. Bulletin no. 86. 213 pp.

One of the objectives of the conference was "to consider the impact of new-crop radiata pine on the forest products industry and on forest products research requirements." Selected papers are indexed.

3569 Lewis, H.V., 1985. **Comments on the Council's view of the forest industry.** Canadian Public Policy. II supplement: 310-314.

The author discusses recommendations by the Economic Council of Canada.

3570 Lonner, G., 1985. **Integrationsmojligheter i kedjan skog-sag-marknad.** Sveriges Lantbruksuniversitet, Institutionen for Virkeslara, Rapport nr. 164. 130 pp.

In Swedish with English summary: "Integration possibilities in the forest-sawmill-market chain." "The aim of this study is to analyze potential means of integrating the operations in the forest- sawmill-market chain." The study is expected to result in the identification of R & D needs, structural problems, and business opportunities.

3571 Lopez de Roma, A. and Cockcroft, R., 1983. **Wood preservation in Spain.** Stockholm, Styrelsen for Teknisk Utveckling, STU Information no. 373. 57 pp.

Includes sections on "forest potential in Spain," and on "sawmilling and woodworking industries."

3572 Maplesden, F. and McConchie, J., 1984. **The economics of fingerjointing for the production of clearwood.** New Zealand Forest Service, Forest Research Institute, F.R.I. Bulletin no. 63. 19 pp.

One of the goals of the study was "to outline the costs, returns, and profitability for a hypothetical New Zealand fingerjointing plant producing fingerjointed blanks for non-structural purposes." (p. 1)

3573 McGuigan, B.N., 1984. **A log resource allocation model to assist forest industry managers in process selection and location, wood allocation and transportion and production planning.** Appita 37:289-296.

"This paper describes briefly the background to the development of the linear programming model known as LOGRAM-1...." (p. 289)

3574 McKeough, P. et al., 1985. **Techno-economic assessment of direct biomass liquefaction processes.** Valtion Teknillinen Tutkimuskeskus, Tutkimuksia; Technical Research Centre of Finland, Research Reports no. 337. 139 pp.

"Processes being developed for the direct liquefaction of biomass were reviewed and six of them were selected for

detailed assessment." The assessment included investment cost estimates and comparison of the production costs. Co-authors are M. Nissila, Y. Solantausta, D. Beckman, and A. Ostman.

3575 Moore, M.D., ed., 1983. **Proceedings of Governor James J. Blanchard's Conference on Forest Resources, Michigan State University, March, 1983.** Co-sponsored by Michigan State University, Dept. of Forestry, and others. 73 pp.

Conference theme: "Creating 50,000 new jobs in Michigan forest products industries." Selected papers from the Conference have been indexed.

3576 Nautiyal, J.C. and Singh, B.K., 1985. **Production structure and derived demand for factor inputs in the Canadian lumber industry.** Forest Science 31:871-881.

"The production structure of the Canadian lumber industry was studied using duality theory in production and costs."

3577 Nevel, R.L., Jr., Lammert, P.R., and Widmann, R.H., 1985. **Maine timber industries--a periodic assessment of timber output.** U.S. Forest Service, Resource Bulletin NE-83. 42 pp.

"Reports the results of a survey of the timber industries in Maine; contains statistics on industrial timber production and receipts, and production and disposition of the manufacturing residues."

3578 Nevel, R.L., Jr., 1983. **Veneer, 1980--a periodic assessment of regional timber output.** U.S. Forest Service, Resource Bulletin NE-77. 17 pp.

"Evaluates regional timber output based on a canvass of the veneer plants in the Northeast...."

3579 Niloufari, P. and Cockcroft, R., 1984. **Wood preservation in Iran.** Stockholm, Styrelsen for Teknisk Utveckling, STU Information no. 412. 39 pp.

Includes information on Iran's commercial forests, timber imports, and a section on Iranian wood-using industries.

3580 Northwest Wood Products Clinic, 38th, 1983. **Proceedings.** Pullman, Wash., Washington State University, Engineering Extension Service. 184 pp.

Includes sessions on "Improved productivity with available resources," Creative marketing of forest products," and "New technology to improve recovery." Selected papers are indexed.

3581 Olson, D.D., 1983. **Timber products economy 1980.** In: Moore, M.D., ed. Proceedings of...Conference on Forest Resources, Michigan State University, 1983. pp. 14-16.

Timber products economy of Michigan. This paper is a summary of Michigan Agricultural Experiment Station Research Report no. 446, Dec., 1982.